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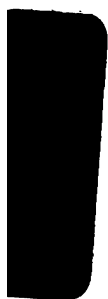
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THE  
WESTERN

UNIV. OF  
CALIFORNIA

# HORTICULTURAL REVIEW:

DEVOTED TO

HORTICULTURE, POMOLOGY, GRAPE CULTURE, WINE MANUFACTURE,  
RURAL ARCHITECTURE, LANDSCAPE GARDENING,  
ENTOMOLOGY, METEOROLOGY, ETC.

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J. A. WARDER, M.D., EDITOR.

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VOLUME III.

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# GENERAL INDEX

TO THE

## WESTERN HORTICULTURAL REVIEW.

### VOLUME THREE.

	PAGE.		PAGE.
A BALANCE Line—Cherries, - - -	307	A New Publication, - - -	136
Abies Canadensis, - - -	547	— Periodical, - - -	433
Abella Unifolia, - - -	467	Another do - - -	136
Acclimation, Discussion thereon, -	116	— World's Fair, - - -	389
— by Charles Fox, - - -	193	A New Catalogue, - - -	533
Acknowledgments, - 97, 139, 285, 383,	582	— Balsam, - - -	405
Achimenes, by Thomas Hutchinson, -	122	Ants, - - -	504
Adrian Horticultural Show, - - -	331	Apples Wanted, - - -	138
Ad Interim Report, - - -	521	— on a Dead Tree, - - -	310
— Pennsylvania Horticultural Society,	414	A Profitable Vine, - - -	138
Address of W. S. King, Esq., - - -	544	Arrow Root, - - -	443
Advantages of Fairs—Improvements, -	147	A Small Southern House, - - -	56
Agricultural Education in Michigan, -	297	Asparagus, - - -	463
— and Horticultural Meetings, - - -	334	Augusta Rose, - - -	335, 430
— School in Virginia, - - -	423	Awards; Flower Committee, - - -	89
Agriculture of the West, - - -	158	— Fruits, Vegetables, - - -	90
Agricultural Bureau, - - -	198	A Window Garden, R. B. N., - - -	52
Agriculture in the Ascendant, - - -	236		
Agricultural Lectures, - - -	238	BARK Grafting: Side Grafting, - - -	306
— Institutes, - - -	51	Beets, (Farm Club, American Institute,) -	124
Agriculture in the Sandwich Islands, -	4	Bleeding of Trees after Pruning, - - -	75
Ailanthus and Abele, - - -	430	Botany of Ohio, - - -	223
Alabama Planter, - - -	142	Brown County Association, - - -	423
Albany and Rensselaer Hort. Society, -	43, 528	— County Agricultural Society, - - -	530
Alkaline Wash for Trees, - - -	110	Buffalo Horticultural Society, - - -	43
American Wines in France, - - -	376	Bulbs, - - -	58
— Assoc'n for the Advancement of Science,	577	Bulletin of the Hort. Soc. of Aube, France,	239
— Trees—Evergreens, - - -	150	— of the Central Horticultural Society,	142
— Wine Growers Association, 130, 180, 331, 423,	491, 574		
— Grape Vines, - - -	526	CARBON'S Mammoth Pie Plant, - - -	434
— Pomological Society, - - -	139	Canvas Houses, - - -	461
Amherstia Nobilis, - - -	221	Catalogues, - - -	47
Analysis of the Strawberry, - - -	22	— of Vilmoren, Andrieux & Co., - - -	321
— of the Grape, - - -	482	— of Medical Plants of the U. S., - - -	434
A New Work on Fruits, - - -	138	— of Plants, etc., - - -	239
— Feature, - - -	139	Cause of the Rot in Grapes, - - -	26
— Foreign Hardy Grape, - - -	101	Cayuga Horticultural Society, 383, 492, 528,	577
Annals of Science, - - -	140, 386	Chemical Analysis of Soils, - - -	290
Annual Meeting at Albany, - - -	183	Chemistry of Agriculture, - - -	167
		Chester County Horticultural Society, -	577

	PAGE.		PAGE.
Chicory, - - - - -	469	Effects of Irrigation, - - - - -	195
Chiswick Novelties, - - - - -	164	— of the Severe Winter, - - - - -	6
Chrysanthemum Show, (Rep. of Flower Com.)	129	— of Cold on Vegetables, - - - - -	15
Cincinnati Horticultural Society, 34, 80, 129, 179,		— of Manure on Dwarf Pear Trees, - - - - -	163
228, 328, 382, 423, 483, 573		Egeria, - - - - -	312
Circle of Dependencies, - - - - -	398	— Prevented, - - - - -	419
Circulation of the Sap, (L. Rehfuess,) - - - - -	337	Elliott's New Fruit Book, - - - - -	581
— in Grape Vines, (S. Mosher,) - - - - -	342	Enameled Glass, - - - - -	472
City Gardens, - - - - -	357	Enlightened Agriculture, - - - - -	295
Chairmen of State Fruit Committee, - - - - -	429	Entries; Fruit, - - - - -	83
Cherry Festival at Cleveland, - - - - -	519	— Green-house Plants, - - - - -	86
Chrysanthemums, - - - - -	388	— Cut Flowers and Decorations, - - - - -	87
Cleveland—Peach Orchard—Vineyard, - - - - -	579	— Vegetables, - - - - -	88
Climate of England, - - - - -	5	Epigæa, - - - - -	320
— and Production, - - - - -	499	Evergreen Nursery, - - - - -	187
Close of Volume Three, - - - - -	537	— Hamlet, - - - - -	187, 196
Coloring Matter of Plants, - - - - -	203	Evergreens, - - - - -	151
Cocoonut Tree, - - - - -	524	FARMER and Planter, - - - - -	286
Cold Frame vs. Hot-beds, - - - - -	365	Fair of the American Institute, - - - - -	580
Columbus Horticultural Society, - - - - -	332	Farm School, - - - - -	431
Concrete Walks, - - - - -	538	Farmer's Libraries, - - - - -	438
Conifers, - - - - -	543	— Companion, - - - - -	235
Colors of Flowers, - - - - -	399	Fall Meetings, - - - - -	46
Constitution of the Am. Pom. Society, - - - - -	54	Farm of B. V. French, - - - - -	137
Cooper Apple, - - - - -	213	Farmer's Gardens, - - - - -	224
Correction: History of Potato, - - - - -	8	Fertilizers of Plants, - - - - -	350
Correction, - - - - -	482	Ficus Carica, or Fig Tree, - - - - -	522
Correspondence, (N. W. Fruit Growers' Com.)	99	Fine Grapes, - - - - -	93
County Fairs: Clark and Madison, - - - - -	96	Floral Show at Paris, - - - - -	452
Covent Garden Bouquets, - - - - -	553	Flowers for the Farmers, - - - - -	355
Cracking and Western Spy Apples, - - - - -	311	— and Fruits for Cities, - - - - -	9
Critique of Nos. 4 and 5, (last volume,) - - - - -	184	Flower Beds; Insect Ravages, - - - - -	25
Cryptomeria Japonica, - - - - -	7	— Thieving, - - - - -	64
Cultivation of Flax, - - - - -	141	Forcing the Tomato, - - - - -	359
Culture of Beets, - - - - -	195	Fortune's Double Yellow Rose, - - - - -	350
— of Tomatoes, - - - - -	64	Forced Asparagus, - - - - -	221
Curculio, by A. C. Hubbard, - - - - -	163	French Gardening, by R. Buist, - - - - -	172
— Different Plans, - - - - -	67	French Notions of the Census of the U. S., - - - - -	55
O. G. Scievers Remarks upon Acclimation, - - - - -	118	Frontispiece, - - - - -	46, 182, 284, 390, 495
Cut Flowers and Decorations, - - - - -	87	French Mode of Planting Cuttings Tested, - - - - -	381
Culture of Fruit, - - - - -	257	Fruit Culture in Europe and the U. S. - - - - -	569
— of Fruit at the South, - - - - -	264	Fruit Prospect, - - - - -	419
Choice Peaches for the South, - - - - -	266	Fruits Worthy of General Cultivation, - - - - -	159
Croton Point Vineyard, - - - - -	279	— which Promise Well, - - - - -	159
Charcoal, - - - - -	288	Fruit Committees, - - - - -	160
DEATH of the Broussonetia. (Rep. of Com.) - - - - -	115	— Report from Illinois, - - - - -	456
Deep Planting of Trees, - - - - -	213	Fruits—Report of Flower Committee, - - - - -	486
Delaware, Franklin, Cuyahoga, and Preble Cos., - - - - -	97	Fruit Committee's Report, - - - - -	489
— County Institute of Science, - - - - -	287	Functions of Leaves, - - - - -	14
Deodar Cedar Seeds, - - - - -	446	Fungi as Useful Productions, - - - - -	399
Description of New Plants, - - - - -	24	Funereal Cypress, - - - - -	7
Des Nones Pear, - - - - -	370	GARDENS at Little Rock, - - - - -	314
Des Nones and Beurre Charron, - - - - -	450	Genesee Valley Horticultural Society, - - - - -	332, 528
Desecration of Nature's Temple, - - - - -	253	General Principles of Forcing, - - - - -	360
Deutzia Gracilis, - - - - -	466	Geneva Horticultural Society, - - - - -	528
Development and Relation of Plants, - - - - -	501	Georgia and Alabama Agricultural Societies, - - - - -	181
Diana Grape, - - - - -	210	Girdling Grapes to Hasten Maturity, - - - - -	174
Diller Pear, - - - - -	264	Goodrich's Culture of the Potato, - - - - -	242
Discourse on Flowers, - - - - -	550	— Addendum, - - - - -	284
Directions to Exhibitors of Roses, - - - - -	559	Grading Fruits, - - - - -	160
Discussion upon Acclimation, - - - - -	116	Grapes and Wines, - - - - -	327
Dowling Monument, - - - - -	431	— in Texas, - - - - -	377
Drying Fruit, - - - - -	68	— in Carolina, - - - - -	491
Dwarf Pears for Market; Duration of, - - - - -	163	— in Indiana, - - - - -	277
EARLY Mandan Corn, by D. T., - - - - -	170	— for a Vinery—Grape Borders, - - - - -	475

# INDEX.

V

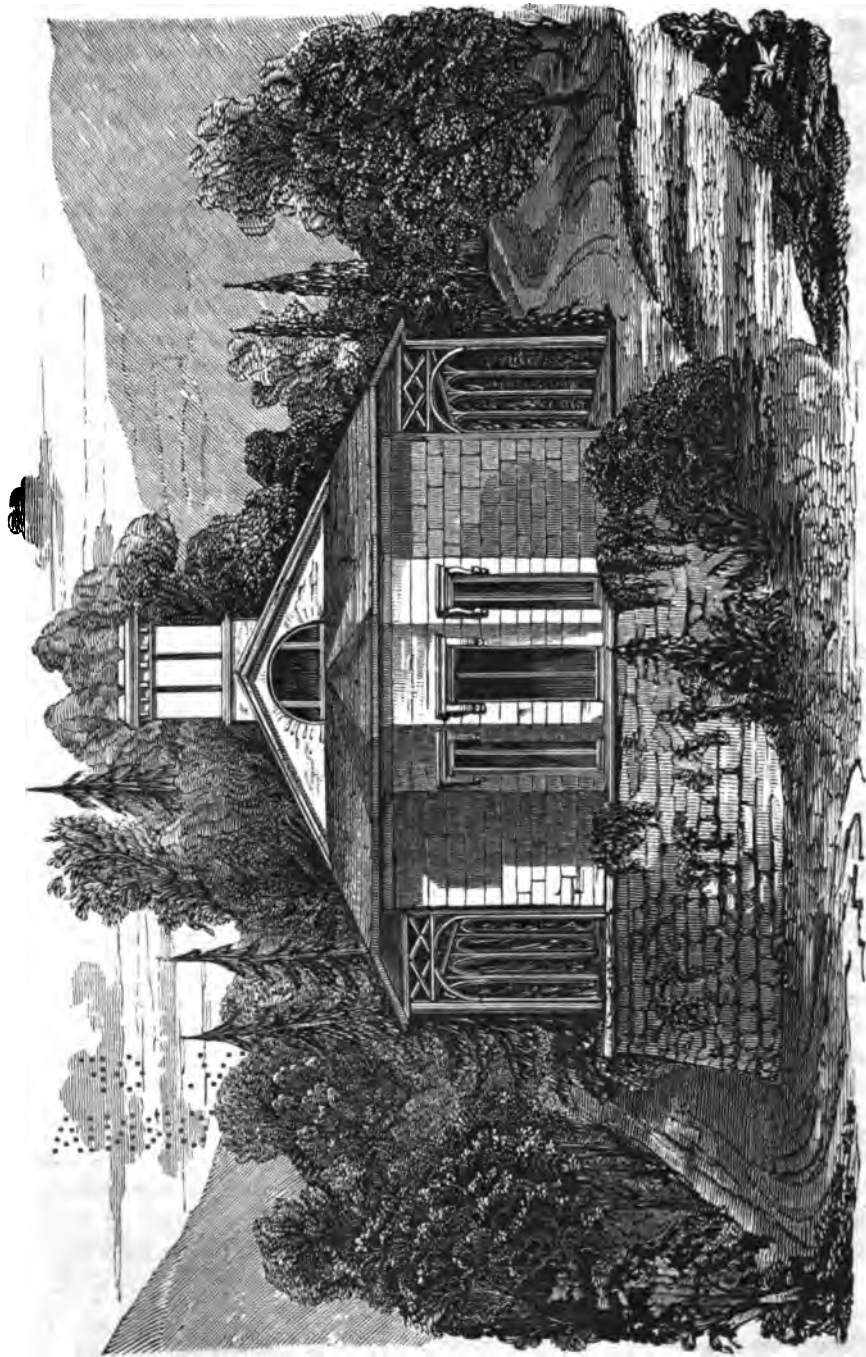
	PAGE.		PAGE.
Great Rains, - - - - -	191	Low Trees, - - - - -	304
Green-house Sponging, - - - - -	356	Lycopodiums, - - - - -	461, 554
Green Asparagus again. Wm. Evans, - - - - -	127		
Gardening, Influence of, - - - - -	472	MANAGEMENT of Orchidaceous Plants, - - - - -	217
Gypsum, or Plaster of Paris, - - - - -	202	Marine Glue, - - - - -	171
		Maryland Horticultural Society, - - - - -	98
HAMILTON County Agricultural Society, - - - - -	382	Massachusetts do do - - - - -	161, 267
Hard Cement for Cracks, - - - - -	294	McAvoy's Superior, - - - - -	139
Heavy Spade vs. Light Fork, - - - - -	274	Meetings next Fall, - - - - -	137
Hedges on Railways, - - - - -	98	— of the N. W. Fruit Growers' Asso. - - - - -	570
Hemlock, - - - - -	547	Memphis Grown Oranges, - - - - -	369
Highland Nurseries, - - - - -	335	Meteorological Tables, 48, 96, 144, 192, 240, 288	
History of the Potato; Correction, - - - - -	8	336, 391, 440, 496, 536, 584	
Hollow Bricks, - - - - -	293	— Table for 1852, - - - - -	392
Honey-Bees, - - - - -	294	Michigan State Fair, - - - - -	44
— in California, - - - - -	5	Missouri Wines for the World's Fair, - - - - -	480
Hollyhocks, - - - - -	559	Milwaukee Horticultural, - - - - -	493
Horticultural Premiums, - - - - -	236	Missouri State Agricultural Fair, - - - - -	333
Hybridizing, - - - - -	408	Mobile Agricultural and Horticult. Societies, - - - - -	323
Hydrangea Hortensis, - - - - -	563	— Horticultural Society, - - - - -	425, 492
		More about Stocks, - - - - -	270
ILLINOIS Agricultural Society, - - - - -	134	Mote's Seedling Strawberry, - - - - -	470
— State Board, - - - - -	231	Myers' Nonpareil, - - - - -	215
Important Meetings, - - - - -	182	Mysteries of Vegetation, - - - - -	254
Impressions of the West, - - - - -	135	My Garden Gate, - - - - -	273
Improvement, by Prof. Mapes, - - - - -	147		
Indiana State Board, - - - - -	229, 423, 530	NATIONAL Pomological Society, - - - - -	35
— State Fair, - - - - -	94	Napoleon's World's Fair, - - - - -	581
Indigenous Flowers, - - - - -	60	New Roses, - - - - -	464
Industrial College, Illinois, - - - - -	135	— York State Fair, - - - - -	41
— Education, - - - - -	137	— Enemy to the Pear, - - - - -	2
Insects, - - - - -	238, 317	— Products, - - - - -	3
Influence of Gardening, - - - - -	472	— Grapes, - - - - -	76
Increase of Heat in Flowering, - - - - -	400	— York Horticultural Society, - - - - -	93, 333, 574
Iowa Farmer, - - - - -	431	— Fruits Tested at Boston, - - - - -	68
— Agricultural Institute, - - - - -	383	— Year, by the Editor, - - - - -	145
Irish Potatoes from Slips, - - - - -	63	— Varieties of Table Corn, - - - - -	237
		— Pelargoniums, - - - - -	62
JAPAN Peas, - - - - -	389	— Water Weed, - - - - -	250
Jeffries Apple, - - - - -	263	— Hardy Climber, - - - - -	300
Joe. Tognio's Lament, - - - - -	477	— York State Agricultural Society, - - - - -	333
Journal of Agriculture, - - - - -	238	— Weeping Willow, - - - - -	448
		— Roses, - - - - -	464
KEEPING Wines, from Redding, - - - - -	175	— Pompons Chrysanthemums, - - - - -	465
Kentucky Horticultural Society, - - - - -	527	Nile Mud, - - - - -	365
		Niagara Falls, - - - - -	469
LANDSCAPE Gardening, - - - - -	31	Nomenclature, - - - - -	416
Large Romanite, - - - - -	216	North-western Agricultural Institute, - - - - -	54
— Sale of Trees, - - - - -	139	— Pomological Congress, - - - - -	47
Late Apple Blossoms, - - - - -	143	Northern Fruits, - - - - -	304
Laurels from R. B. N., - - - - -	151	Notes on the June Number, - - - - -	493
Laurel and Azalea Soils, - - - - -	273	— on the July do - - - - -	531
Lee County Agricultural Institute, - - - - -	54	North Carolina Agricultural, - - - - -	425
Leaves for Potatoes, - - - - -	274	Notes on April and May Numbers, - - - - -	436
Letter from Memphis, - - - - -	28	Notice of the January Number, - - - - -	298
— to the Am. Pom. Society, W. W. Valk, - - - - -	77	Northern Ohio Poultry Association, - - - - -	133
— from Fournier, - - - - -	77	Notes on December Number, - - - - -	234
— from Illinois—Grape Prospect, - - - - -	526	Notices, - - - - -	47
— from Wm. R. Prince, - - - - -	534	Novelties, - - - - -	174
— from Wm. Murray, - - - - -	378	Number of Plants, - - - - -	199
— from F. A. Michaux, - - - - -	278	— of Plants per Acre, - - - - -	171
— from France, Leroy and Fougard, - - - - -	143	Nursery Changes, - - - - -	47
Life and Duration of the Grape Vine, - - - - -	28	— Apprentices, - - - - -	23
Liquid Manure, - - - - -	169		
Lerain Horticultural Society, - - - - -	130	OBSERVATIONS at St. Louis, by Engelmann, - - - - -	188
Louisville Horticultural Society, - - - - -	492	— for December, by John Lee, - - - - -	239
Love-sick Potatoes, - - - - -	425	Ohio State Fair, - - - - -	38, 487, 582

	PAGE.		PAGE.
Ohio Pomological Society, -	39	Review of Review—by KARR, -	152, 281
— Board of Agriculture, -	180, 228	Ribes Sanguineum Made Hardy, -	397
— Farmer, -	186	Richland County Fair, -	133
Oleanders and Glycine, -	125	Roberts' Potato Cure, -	431
Opening of the Volume, -	1	Roots as a Means of Propagation, -	250
Orange Gardens of St. Michael, -	454	Rules for Laying Out Given Surfaces, -	57
Organic Elements of Plants, -	352		
Origin of Broom Corn and Weeping Willow, -	470	SALADS, -	220, 516
— of the Dahlia, -	557	Salt for Worms, -	469
Ornamental Gardening, -	503	Scenery, etc., of the North-west, -	201
Oyster Shells for Fruit Trees, -	72, 231	— in Bengal, -	229
		Scuppernon Vineyard, -	227
PEACHES—Peach-house Culture, -	372	Sea-Kale, -	560
— at the South, -	409	Shanking of Grapes, -	423
Peach Buds, -	237	Shrubberies, -	405
Pear Blight, -	143	Side Grafting, -	306
Peeling and Not Peeling, -	91	Skirret, -	168
Pennsylvania Horticultural Society, 92, 44, 332, 577		Skinning Old Apple Trees, -	68
— State Fair, -	121, 423	Something about Stocks, -	112
Permanency of the Sexes of Plants, -	571	Southern Planters' Almanac, -	287
Phosphate of Lime, -	290	— Agricultural Association, -	237
— of Soils, -	516	— Apples—Report, -	366
Pittsburg Horticultural Society, -	576	— Planter, -	430
Plants for Edging Borders, -	318	Sowing Seeds, -	554
Plant Antipathies, -	251	Soap Suds, -	470
Plate Presentation, -	82	South Carolina Agricultural Institute, -	53
Pleroma Elegans, -	222	Spluch, -	219
Pomological Meeting at Utica, -	17	Spring Duties, -	319
— Reports from Kentucky, -	186	Springfield (Illinois,) Horticultural Society, -	492
— Virginia and South Carolina, -	261	Spare the Birds, -	505
— Pennsylvania, -	204	Springfield and its Vicinity, -	102
Pomology; Rome Beauty, H. N. Gillett, -	65	Specimen Fruits, -	138
Postage on this Work; New Law, -	33	Spent Tan; its use as a Manure, -	61
Potato Rot, -	10, 388	Statistics of Ohio Agriculture, -	548
— Murrain, -	452	Strawberry Theory, -	358
Pot Plants, -	483	State Board of Agriculture, -	134
Potting Strawberries, -	525	Stowell Sweet Corn, -	9
Propagating Tender Plants, -	507	Straw as a Covering, -	33
Protecting Grapes, -	178	Stowell Corn, -	61
Prof. Norton's Lectures, -	238	Strawberry Seedlings, -	563
Prairie Farmer, -	286	St. Catharine Plum, -	111
Pruning Orchards.—Cultivation of do., -	418	Strawberry Culture, -	564
— Roses, -	275	Stuyvesant Pear, -	404
Public Grounds at Washington, -	183	Subsoil Gardening, -	556
— Parks, -	497	Sugar Corn, -	276
Pyramidal Training, -	322	Sylvia Americana, J. P. Kirtland, -	149
Pyramid Pruning, -	452	Sweet Potatoes, -	64
RAIN Drops, -	192	TABLE for November, -	192
— at Columbus, -	268	— of Analysis of Grains, -	121
Raisins, -	483	Tan-Bark, -	183
Red Pepper, -	275	— Again, -	212
Raspberry Jam, -	11	— On Strawberries, -	61
Rehfuus' Wines and Theory, -	324	Tea Seeds, -	447
Rejected Fruits, -	160	Temperature for July, John Lea, -	188
Report of Fruit Com. at Indiana State Fair, -	105	Testing Sandstone, -	290
— on the Death of the Broussonetia, -	115	The Apple-worm, -	309
— Vegetable Committee, October 1, -	123	The Earth, Plants, and Man, -	581
— Flower Com. on Chrysanthemum Show, -	129	The Horticulturist, -	47, 238
— Buffalo Horticultural Society, -	141	The Garden; Buibs, J. A. Kennicott, -	58
— Wine Committee, -	89	The Western Agriculturist, -	186
— on Mr. Longworth's New Grapes, -	173	The Potato Disease, -	149
— of Vegetable Committee, -	490	The Curculio Premium, -	568
— of Committee on Cherries, -	490	The Florist, -	387
Resume, -	530	The Song of the Strawberry Girl, -	568
Review—Poetry of Vegetable World, -	539	The Cold Grapery, -	387
Reverence for Trees, -	45	The Vinery, R. Errington, -	379

	PAGE.		PAGE.
The Acclimation Question, - - -	393	VERNAL Flowering Shrubs, . - -	496
The Everlasting Curculio, - - -	417	— Flowers, - - -	403
The Beautiful in Horticulture, - - -	401	Vineries, - - -	422
The Herbemont Crape, - - -	572	Vineyards and Wine-vats of France, - - -	480
The Pleasures of a Garden, - - -	561	Vine Culture in Indiana, - - -	178
The Frontispiece, - - -	432	Vineries at Booneville, - - -	30
The Farm and the Shop, - - -	433	Vineyard Calendar, 26, 128, 226, 277, 377, 420, 473,	525
The Fuchsia, - - -	406, 511	Vitality of Seeds, - - -	321
The Virginia Creeper and English Ivy, - - -	441	WASHTENAW County Fair, - - -	96
The Crystal Palace, - - -	443	Warren County Horticultural Society, - - -	577
The Pansy, - - -	467	Water Proof Paint, - - -	200
The Rhododendron, - - -	506	Wax or Tallow Plants, - - -	442
The Ferns, - - -	510	Watering—its Uses and Abuses, - - -	513
The History and Culture of the Mignonette, - - -	512	Wearing out of Varieties, - - -	455
The Strawberry Question Settled, - - -	533	West Chester, (Pa.) Horticultural Society, - - -	92
The Normandy Genetling, - - -	524	Western Literary Association, - - -	136
The Frontispiece—a Farm House, - - -	534	— Poultry do - - -	48, 133
The Frontispiece—a Plantation House, - - -	582	— Strawberries Abroad, - - -	577
Theory of Pruning, L. Young, - - -	69	White Winter Pearmain and Michael Hen-	
Three New Pears, A. Leroy, - - -	161	ry Pippin, - - -	302
The Strawberry Boy, - - -	289	Why does Sap Rise in Trees? - - -	12
The Strawberry Question, - - -	565	Window Gardens, - - -	561
The Apple Orchard, - - -	300	Wines, - - -	323
Things Seen in Arkansas, - - -	313	Wine Committee at Utica, - - -	41
Theory of Circulation, - - -	344	Wine Show at Hermann, Missouri, - - -	71
Third Industrial Convention, - - -	234	Wine Growers' Association, - - -	91
To Correspondents, - - -	183	Winter Show of Fruit at Albany, - - -	331
Transmission of Seeds in Earth, - - -	223	Winter Meeting, Albany, N. Y., - - -	237
Transactions of Windham Agricul. Society, - - -	434	— Garden, - - -	222
Transmutation, - - -	549	— Digging, - - -	127
— of Plants, - - -	253	Western Science Vindicated, - - -	434
Trees, - - -	292	Western Plow Boy, - - -	285
Troubles of a Country Nurseryman, - - -	266	Wisconsin Farmer, - - -	287
Treatment of Tomatoes and Lima Beans, - - -	8	Working Farmer, - - -	384
Tropical Vegetables, - - -	168	Worms and Bugs, - - -	567
Turbid Wine Cleared, - - -	324	Wool from Wood, - - -	447
UNITED States Agricultural Society, - - -	236	ZANESVILLE Horticultural Society, - - -	96, 574
Unprecedented Fall of Snow, - - -	336	— Agricultural, - - -	423
Upland Cranberries, - - -	455		
Use of Lime, - - -	546		



Unit 1 of  
California



C. H. Morris, Pr.

## CASCADE COTTAGE,

In the South of Ireland.

Tinsley, Arch't.





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VOL. III.

OCTOBER, 1852.

No. 1.

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#### THE OPENING OF THE VOLUME.

THIS number is the first of a new venture upon the good nature of my friends, the readers of the Review, who for two years past with commendable patience have smiled upon the efforts made to please them. Will they continue to smile? It is hoped they will, and that others, many others, will unite with them in laudable efforts to sustain a work that has been undertaken for the benefit of the cause, and which has been continued in spite of many difficulties during the two years just closed.

The proprietor has not expected to reap any great pecuniary reward for his labors, but there is no reason why he should not be amply compensated, provided he devotes himself vigorously to the subject in hand. He has a wide field open before him, upon which he is ever ready to sow the good seed of useful knowledge. Who will not receive it? The great West, and the South and South-west, are filled with an intelligent population, who are animated with uprisings of good taste, and who are becoming aroused to the importance of acquiring definite and reliable information upon matters of horticultural and rural interest. There are also many who have already taken bold strides onward upon this pathway of im-

provement—the pioneers of their neighborhoods, and who are already valuable teachers. Let their light not be hidden in their own valley; let it shine out to illumine others less accessible to their meliorating influences than the few favored neighbors; let them communicate to the readers of this work by sending their contributions of gathered observations upon our favorite topics.

Kind friends: for two years I have endeavored to cater to your wants. It has been a pleasant and a willing task. I have endeavored so to manage it as to please all reasonable beings; but am sensible that in some instances failure has attended the effort, and a few excellent persons have been dissatisfied, and withdrawn their support. A straight forward course will be pursued in conducting this journal, and the result must be left to rest upon the decision of those who are to be the judges.

One other subject, in the course to be adopted in the present and future volumes, needs to be prominently set forth. The terms are, that the subscription must be *paid in advance*. This is necessary to the success of all similar works, and must be rigidly adhered to. Therefore, if any person fails to make a prompt remittance of the amount

due on the volume now in progress, he must not be disappointed should the ensuing numbers fail to reach him, for it is determined to enforce this rule; it is necessary to the existence of the work, to the comfort of the person conducting it, and to the welfare and profit of all parties concerned. Lend your aid, then, by a prompt liquidation of the claim which I trust you will all admit me to hold upon your purses for another year. Be prompt, and you will feel none the poorer, while the poor workmen will be satisfied in their weekly demands. But the proposition is so plain and so palpably just, that it is a waste of time to expend arguments upon it. The rule is simple, so that all may comprehend its import; and the interests of the work, the comfort of the editor, and more than all, the satisfaction of the reader requires that it shall be decidedly enforced. I am aware of the difficulty some persons feel in making remittances. This is much diminished by the present postal arrangements, and may be made still more easy by two or more persons uniting; and further still, in the few instances which exist, by sending the back dues, and if you choose to trust me, by sending an advance for two years, which may be done by inclosing five dollars, and this sum will entitle the subscriber to receive the work for two years, or the two volumes.

The Editor is and has been obliged to travel extensively, embracing every opportunity to use his eyes and ears in obtaining correct horticultural information for the benefit of his readers. The great State Fairs and horticultural shows of the country have been visited as generally as possible, with especial regard to the horticultural departments. The State Pomological Convention of Ohio, at Columbus, referred to on another page under the head of Transactions, and the great gathering of Fruit Growers

at Philadelphia, have both of them been visited with profit as well as pleasure, in the valuable pomological information to be obtained upon such occasions. Every effort is made to improve each opportunity to render the pages of the Review more and more valuable to the reader; and for all this, subscribers are only asked to be prompt, and to exert their influence to extend the subscription list, which is urged for their own benefit, in the improvement of the work, which is promised to ensue if increased means be furnished.

Societies are requested to take under their consideration the propriety of awarding books as premiums. The successful candidates will thus receive a valuable memento of their triumphs, and at the same time be enabled by their increased stock of knowledge to compete again with renewed and increased prospects of success. But it is hardly necessary here to say more upon this topic, since many of our state and county societies have already incorporated this idea in making up their premium lists; and there is no doubt that great satisfaction will ensue to most of those who win the prizes.

Reader, I have made you my annual congée. A good year to you all. May your numbers increase to my satisfaction, and may you become more and more satisfied with your friend and well-wisher,

THE EDITOR.

**NEW ENEMY TO THE PEAR.**—A horticultural friend yesterday showed us a number of pear leaves, with a number of small green worms upon them, some so small as to be almost invisible and the largest three-quarters of an inch in length. They are very ravenous, and some trees have been entirely stripped by them. The whale oil soap (about a pound to three gallons of water) kills them instantly. They commence by eating a small circular hole in the leaf; but soon demolish the whole, including the stem.—*Salem (Mass.) Gazette.*

## Miscellaneous.

### NEW PRODUCTS.

The following extracts from the communication of Mr. Bonyng, to the National Intelligencer, are commended to the consideration of the thoughtful reader, especially in the South, in which we are to witness great changes in the course of agriculture:—

To enter into an argument to show the absolute necessity of extending agriculture, and of introducing staples for that purpose, I have not time, on the spur of the moment, to do so; nor probably would you have space for such arguments. Let it suffice for the present to state, that by commercial returns, it seems you import some fifty millions of dollars more than you export. Now, without touching on the subject of protective tariffs or free-trade subjects, I believe the means of remedying the deficiency is easy—*perfectly so*.

In two articles alone you consume as follows:

Coffee, 145,000,000 lbs., value,	
say - - - - -	\$34,000,000
Tea, 28,000,000 lbs., value, say	7,000,000
	<b>\$41,000,000</b>

There is a sum nearly embracing the fifty millions that might be saved; and these articles do really cost the nation much more than fifty millions of dollars, because of the expense of shipping, and of the men employed in conveying these articles to America.

Again: America imports from the other side of the globe—from our antipodes—wool, hides, saltpeter, indigo. The first two and last of these can be produced here for domestic use, and probably saltpeter exists in some of your old earths; *and even that article may be cultivated too*—saltpeter produces itself in the earth with great rapidity. These staples can be produced for domestic use, and in any quantity for exportation.

The words, "introduction of exotics," may startle, or may not interest generally, and perhaps even those more exalted minds who

reflect for the people's welfare; they may seem to them as a half forgotten dream.—Then let the question at once be put to all, *what article is now cultivated in America that has not been at one time unknown to America?*

All the articles enumerated above may, with the same success as cotton and rice, be cultivated in some one or other section of the United States.

Chinese cultivators, on an average, sell their teas at seven cents per pound.

Javanese, to the Dutch government, sold their teas, by contract, for five cents per pound.

In Assam, the writer made his teas under four cents per pound—a tea far superior to any imported into this country.

American consumers pay for this herb, which is produced at so small an amount, sixty to one hundred and fifty cents per pound.

It is curious so much time should elapse and no efforts be made to introduce these staples; *and it can alone be solely ascribed to all absence of inquiry*, and a reckless want of investigation on the part of the few individuals who experimented on a few plants. Coffee has been already produced from the West Indies, and a change of thirty degrees of latitude made at once. Tea has been introduced, by a gentleman from South Carolina, from the scorching latitude of Canton, twenty-three degrees north, to Greenville, thirty-five degrees north latitude.—There is not a latitude in the world hotter than Canton, and so different from that of Greenville, South Carolina.

The genuine teas are cultivated from latitude twenty-seven degrees to thirty-two degrees north latitude, under severe frosts and snows, and many of the mountains, high upon whose sides the plant grows, are capped with perpetual snow.

Tea can be produced in this country under seven cents a pound, calculating labor at fifty cents per diem. A tea plantation requires care the first and second years; *after which it is a most hardy plant*, and will

yield tea from twenty-five to thirty years. So the only labor is plucking the leaves and drying them, which is labor for women and children. A man actively engaged ten hours in the day may collect fifty to sixty pounds of green leaf, and another would manufacture them, and the quantity of dried tea would be twelve and a half to fifteen pounds. A fair plantation would produce three hundred pounds per acre. I have made as much as four hundred and eighty pounds per acre in the year, on some land I held on the western border of China.

**INDIGO.**—No one doubts the capability of America to produce indigo; and the same cause alone, that this country is not the world's indigo mart, is want of inquiry. It is said that the manufacture of indigo is unhealthy. This is a perfectly erroneous impression. I cultivated and manufactured it for five years, and never suffered from it; nor, in the whole of my experience, did I ever hear it mentioned by planters that it was unhealthy. Indigo can be produced here under thirty cents per pound. Prices of indigo, for the last forty years, vary from one dollar to two dollars per pound.

The expenses of introducing the tea, indigo, and coffee plants, the date-tree for sugar, mango, lechee, and a great variety of other fruit trees, various grasses, cereals, pulses, millets, etc., natives of latitudes similar to latitudes of North and South Carolina, Georgia, and across under thirty-six degrees north latitude to the west, would not be more than five thousand dollars at most. Is there no spirited man or body of men in all America—is there no one to feel a generous resolve to give to his country these staples, and give employment to the numbers now in want?

FRANCIS BONTING.

#### Agriculture in the Sandwich Islands.

THROUGH the politeness of the editor of the *Polynesian*, we have received a copy of a pamphlet publication of Transactions of the Royal Hawaiian Agricultural Society, at its first annual meeting at Honolulu, in August last. The papers and reports on Hawaiian agriculture, which are compiled in this publication, are highly interesting, and many of them have never before appeared in print.

The society is composed of some of the leading residents, and its object is, of course,

to promote the cultivation of the land of the kingdom under the most improved and most advantageous system of agriculture. It has been very successful in its organization, and is destined to achieve great good for the interest of the islands in assisting the productions of its soil.

Were our columns less occupied this morning, we should take pleasure in furnishing those of our readers who feel an interest in agricultural matters, a sketch of the condition and progress exhibited in Hawaiian affairs by the reports before us. We can not make use of more of the work, however, than the following extract from an instructive statement relative to the Hawaiian seasons:

"The general division into wet and dry months furnishes one important clue to Hawaiian seasons. The rainy months in the islands are generally from October to April, seven in number. Altogether frequently little rain falls either in October, November, or April. The wet season varies somewhat in different years and in different islands, but not generally very much.

"But the time for planting the same articles in different soils and different localities, varies somewhat widely. And in respect to these planting seasons is the main field for inquiry before us.

"Not only is the rainy season to be consulted, but the natural moistures of the soil, its elevation, its position on the northern or southern slope of a hill, especially the side of a pali. Many crops may be delayed a month or two in places where irrigation can not be practiced. On the windward coast, especially near the sea, the seasons of high surf, when the salt spray sweeps over the coast with the power of a destructive frost, must be consulted and avoided. During that season corn, beans, potatoes, etc., if planted in exposed situations, are sure of destruction. In many places the season for the caterpillar and grub-worm must be consulted. Natives on Oahu rarely think of planting potatoes, corn, beans, etc., until the season for these vermin has passed."

The writer here enumerates the various productions of the Island, with observations on the periods of planting, and general directions for the guidance of the farmer. The report closes with a few intelligent remarks on the climate, and the effects of the season of Kaiko, or high surf.

"On the windward side of the islands there are certain periods in the fall or winter when there is a high surf connected with a north or north-west wind. At such times a salt spray spreads over the adjacent shore, and in the distance, often resembles a Newfoundland fog.

"The salt spray is ruinous to many, perhaps most vegetables that may be exposed to it. Corn, wheat, beans, peas, potatoes of all kinds, beets, carrots, parsnips, etc., wither before it as if cut down by northern frost. Even the leaves of the tamarind fall as if smitten by a November blast in New England.

"Natives are cautious of planting in places exposed to the Kaiko until the season of its violence has passed."—*Alta California*.

**THE HONEY BEE IN CALIFORNIA.**—Mr. W. W. A. Buckley, of Newburg, N. Y., has succeeded in introducing the honey bee in California. Out of three hives taken from New York, he succeeded in crossing the Isthmus with one, which arrived at San Francisco recently in healthy and working order. Great difficulty has been experienced in importing bees to the Pacific, in consequence of the wax melting in the tropics. Numerous experiments have failed on this account.

#### The Climate of England.

We suppose the climate of England to be to most Americans a profound mystery.—That a country situated between fifty and fifty-five degrees north latitude, should possess a far milder climate than we enjoy between forty and forty-five degrees, is a strange fact, but nevertheless a "fixed" one. We have before said, the cause of it is, that England is warmed by ocean currents. But we find an article in the Gardener's Chronicle so fully explaining the matter, that we are sure our readers will like to peruse and preserve it.

*Prairie Farmer.*

The geographical position of the British Isles renders their climate peculiar. They lie in the way of a current which proceeds from the equatorial ocean and circulates

round them, carrying with it sufficient heat to prevent freezing of the ocean, even on the northern coasts. In consequence of this, the average mean temperatures of summer and winter differ less in Britain than in any other country in the world equally distant from the equator. The following table, calculated from twenty-six years of daily maxima and minima temperatures, exhibits the average mean range throughout the year at Chiswick:

#### AVERAGE TEMPERATURE AT CHISWICK, 1826-1851; TWENTY-SIX YEARS.

	Jan.	Feb.	March.	April.	May.	June.
Mean Max. ....	42.21	47.41	50.88	57.48	65.03	77.14
Mean Min. ....	31.37	32.71	34.16	37.18	43.11	49.07
Mean .....	36.79	40.06	42.52	47.30	54.07	60.61
Mean monthly range .....	10.84	14.70	16.72	20.35	21.92	23.07

	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Mean Max. ....	64.07	73.20	67.49	58.93	49.99	45.30
Mean Min. ....	42.73	51.04	46.81	42.08	36.17	34.07
Mean .....	63.40	62.12	57.15	50.50	43.08	39.69
Mean monthly range .....	21.34	22.16	20.68	16.85	13.82	11.23

From the above it appears that the mean temperature of the whole year is 49.78°

Mean temperature of the three hottest months—June, July, August, 62.04

Mean temperature of the three coldest months—December, January, February, 38.84

These months comprise the summer and winter season, as the year is divided by meteorologists.

Accordingly, the difference in mean temperature of summer and winter is 23.20°

And of the hottest and coldest months 26.61

Near the sea—whether on the east, west, south, or even north coast—the range of temperature is less than the above. We may select for example, Penzance in Cornwall, lat. 50° 7'; and Sandwich, Orkneys, lat. 59° 5'. These places are on parallels of latitude, which are upward of 600 miles apart; and they are situated respectively almost at the extreme south and north limits of the island.

At Penzance, Cornwall,  
The mean temperature of the year is 51.78°  
Difference of summer and winter, 16.18  
Difference of hottest and coldest months, 19.48

At Sandwich, Orkneys,	
The mean temperature of the year is	46.25
Difference of summer and winter,	14.31
Difference of hottest and coldest months,	17.45

These places have comparatively little variation of mean temperature; and it is remarkable that its uniformity is greater in the Orkneys than in Cornwall. It is also found that at Sandwich the mean temperature of December and January average  $2^{\circ}$  higher than that of the corresponding months at Chiswick. The former place must, therefore, be more immediately under the influence of a warm current of the ocean. It is impossible to account for the circumstance in any other way.

Probably these currents may act at times with greater or less intensity than usual.—It is certain, however, that they maintain a *permanent modification of the climate* of this country. Were not this the case our shores would become ice-bound, and most evergreens and south of Europe plants, that now flourish throughout the kingdom, would soon disappear. How much our climate is mitigated by the warmth of the ocean currents may be inferred from the following comparative temperatures of places situated on the same, or very nearly the same, parallels of latitude.

At Gosport, Hampshire, lat.  $50^{\circ} 47'$ , the mean temperature of January is  $40^{\circ}$ .

At Orenburg, Russia, lat.  $50^{\circ} 46'$ , the mean temperature of January is  $0^{\circ}$ .

Dublin, Liverpool and Manchester are almost on the same parallel of latitude with each other, and with Bermaul, Siberia; and the following is the mean temperature of January:

Dublin, lat. $53^{\circ} 21'$ ,	-	-	38.49°
Liverpool, lat. $53^{\circ} 25'$ ,	-	-	39.95
Manchester, lat. $53^{\circ} 29'$ ,	-	-	36.70
Bermaul, lat. $53^{\circ} 20'$ ,	-	-	—5.57

Selecting another parallel of latitude, we find Glasgow, Edinburgh, Copenhagen, Moscow, and Kasan, all between lat.  $52^{\circ} 41'$  and  $55^{\circ} 68'$ , and for the purpose in hand may therefore be considered as being on the same line. The mean temperature of January is, at

Glasgow,	-	-	-	38.23°
Edinburgh,	-	-	-	37.38
Copenhagen,	-	-	-	29.25

Moscow,	-	-	-	13.57
Kasan,	-	-	-	3.45

At Uist, in Shetland, lat.  $60^{\circ} 45'$ , the mean temperature of January is  $40^{\circ}$ . At Tomsk, in Siberia, lat.  $56^{\circ} 30'$ , it is  $4^{\circ}$  below zero. At Yakoutsk, in Siberia, lat.  $62^{\circ} 1'$ , the mean temperature of January is  $45^{\circ}$  below zero, or  $85^{\circ}$  colder than in Shetland.

In order to find as high a mean temperature in January as that of Uist, if we except places near bays and estuaries accessible to the tropical currents, we must go to the South of France, or of Italy. In January, Uist is only  $1^{\circ}$  colder than Constantinople, although the latter is  $20^{\circ}$ , or 1390 miles further to the south.

From these instances, it appears evident that much heat is continually conveyed by currents urged from the tropical ocean, so as to render the winters in the British Isles comparatively mild—not only in the southern, but even in the northern parts, where, in the winter season, little heat can be derived from the sun, then scarcely appearing, and but for a brief period of the day, above the horizon. The tendency of these currents is to produce a constant mildness, as appears from the average here given; and many things are in consequence cultivated, which could not otherwise be attempted in the open air in so high a latitude.

#### The late Severe Winter.

ITS EFFECTS UPON VEGETATION.—The following is extracted from an article in the last number of the New England Farmer:

Reports from various parts of the country establish the fact that the severe cold of the late winter has proved destructive to many fruit trees and plants. When we say the severe cold, we do not mean to declare that it was the intensity of the cold in itself that has proved so fatal, for that we do not pretend to know. The question still remains an open one, and demands the careful investigation of those best able to settle it.

Is it the intensity of the cold that has killed the trees and plants?

It is said that the tree becomes frozen so hard that the sap vessels are burst, and that causes its death. There are not many winters in New England but that the trees are all frozen so solid that logs of them may be split almost by a single blow of an axe from

an athletic arm. But this does not seem to have been a sufficient condensation of cold to injure trees, or we should have lost them all. If they could not withstand this degree of freezing, they would soon become extinct. They not only withstand the lowest temperature that occurs in this latitude, say from sixteen to twenty degrees below zero, as the lowest point, but in the neighborhood of the arctic regions they live and grow to an enormous size.

Sir John Franklin (whose sad fate is universally lamented) in his overland expedition to those regions, between the years 1823 and 1827, wintered where the strongest brandy froze solid in a few minutes upon exposure, and the ink with which he was writing frequently froze upon his pen, although using it immediately before a huge fire of logs; and yet in a climate giving this intense, long-protracted, and appalling cold, he gives an account of trees growing there whose circumference is larger than any we have heard of elsewhere. The trees, according to his statement, attain a height of from 150 to upwards of 250 feet, varying from twenty to nearly sixty feet in circumference.

#### The Funeral Cypress.

THE most beautiful tree found in this district is a species of weeping Cypress, which I had never met with in any other part of China, and which was quite new to me. It was during one of my daily rambles that I saw the first specimen. About half a mile distant from where I was, I observed a noble looking fir-tree, about sixty feet in height, having a stem as straight as the Norfolk Island Pine, and weeping branches like the willow of St. Helena. Its branches grew at first at right angles to the main stem, then described a graceful curve upward, and bent again at their points. From these main branches others long and slender hung down perpendicularly, and gave the whole tree a weeping and graceful form. It reminded me of some of those large and gorgeous chandeliers, sometimes seen in theaters and public halls in Europe.

#### The Cryptomeria Japonica.

Never in my life had I seen such a view as this, so grand, so sublime. High ranges of mountains were towering on my right and

on my left, while before me, as far as the eye could reach, the whole country seemed broken up into mountains and hills of all heights, with peaks of every form.

While gazing with wonder and admiration on the scene, my attention was arrested by a solitary Pine-tree of great size, standing about a hundred yards from the gateway.—No other trees of any size were near it. Its solitary position near the pass, and its great height and beautiful symmetry, made it appear more striking. "What could it be? was it new, or did we already possess it in England?" I must confess that for a few seconds I had eyes for nothing else. Chairs, coolies, and mountains, were all forgotten, and I believe, had the guard of Celestials attempted to prevent me from going into Fokien, the only boon I should have asked at their hands would have been to be allowed to go and inspect this noble Pine.

The Chinese guard, however, had not the slightest intention of interfering with my movements, and, as the tree was on the roadside, I soon came up to it, and found it to be the Japan Cedar, (*Cryptomeria japonica*), a tree which I had already introduced into England, and which, even in a young state, had been greatly admired there. I had never before seen such a noble specimen, and, although I would rather it had been something new, I yet felt proud of having been the means of introducing into Europe a tree of such size, symmetry, and beauty. It was at least 120 feet high,—it might be much more,—as straight as a larch, and had its lower branches drooping to the ground. It had not been "lopped," like other Chinese trees, and was evidently preserved with great care. My Chinamen looked upon it with great admiration, and informed me it was the only specimen of the kind in this part of the country, and that it had been planted by some former emperor when he crossed the mountains.

The sides of the mountains here were clothed with dense woods of the lance-leaved Pine, (*Cunninghamia lanceolata*.) This was the first time I had seen this Fir-tree of sufficient size to render it of value for its timber. Many of the specimens were at least 80 feet in height, and perfectly straight. There was a richness too in the appearance of its foliage which I had never seen before; sometimes it was of a deep green color,

while at others it was of a bluish tint. There are, doubtless, many varieties of this tree amongst these hills.—*Fortune's Wanderings in China.*

#### Correction.

My good friend, DAVID THOMAS, has sent me the following correction in a point of history, inadvertently overlooked by O. Mussey, in the article on Potato, of last month:—

In the Western Horticultural Review, for last month, after expressing thy doubts of *Solanum tuberosum* being indigenous to Virginia, I observe the words—"nor are we aware that heretofore it has ever been disputed." Now if thou wilt turn to Genesee Farmer, volume 3, page 60, thee may find my remarks on that subject, written almost twenty years ago; and I will copy two paragraphs, as it may save thee the trouble of search.

"I have long considered it a cause of wonder, how Sir Walter Raleigh could take home with him, from Virginia, the common potato. The best informed naturalists have never suspected it of being indigenous to any part of the United States; and there were no people to introduce it there except the Indians, who have not been credited with its cultivation. It is therefore improbable that he ever found it in Virginia."

"The plant described by Heriot, is evidently not the common potato, which grows not in damp soils; neither do the tubers hang together as if fixed on a rope. But, in both these particulars, the description agrees exactly with the wild potato, (*Glycine apios* of Linnaeus—*Apios tuberosa* of Pursh,) which is a native of Virginia. Elliott says it grows in damp rich soils, along the margins of swamps [in South Carolina;] and in this district I have found it near springs in rich vegetable mold; also along the wet but fertile lands near the Seneca and Niagara rivers."

In the Albany Cultivator, for February, 1847, page 61, thee may also find a note with my signature, headed, "THE POTATO

NOT A NATIVE OF VIRGINIA;" and, as the article is rather brief, I will take the liberty to lay it before thee. It was written as a reply to Joseph Breck.

"Some years ago, I had an opportunity to read Gerard's Herbal, (edition of 1633,) and was aware of his assertion, before I saw the extract relative to the potato in the last Cultivator, that he had 'received roots hereof from Virginia.' Probably he believed so; but very improbable that he did so. He has neither named the person from whom, nor the year in which he received them,—things scarcely to be omitted, if they had been brought to him directly from that country.

"At a time when newspapers were not published to correct the idle rumors of the day, it is not surprising that the native country of the potato should be mistaken; and however eminent Gerard was as an herbalist, his ignorance in some other matters was very remarkable. In his account of the African Marigold, (*Tagetes erecta*), well known to have come originally from Mexico, he says—'They grow everywhere almost in Africke of themselves, from whence we first had them; and that was when Charles the Fifth, Emperor of Rome [!] made a famous conquest of Tunis.'

"The author of the article on the potato, in the Library of Entertaining Knowledge, evidently mistook the wild potato (*Apios tuberosa*), for the common potato, (*Solanum tuberosum*.) This would not have been the case, if Heriot had also described the common potato; and his not doing so, proves conclusively to me, that the early settlers never found it there. Neither have any of our botanists."

#### Treatment of Tomatos and Lima Beans.

DURING the early part of the growth of either of these crops, the surface of the soil should be frequently disturbed. When tomatos have set their fruit, they should be shortened-in, and it may be deferred until the largest of the fruit is of half size, when it may be readily observed that ninety per cent. of the fruit is within eighteen inches of the ground, while ninety per cent. of the vine or bush is beyond that distance. The vine, therefore, should be trimmed to



within half an inch of the tomato nearest the end of each branch ; this will admit sun and air freely, and although ten per cent. of the tomatoes that might have grown will be taken away, still the remaining portion will be greater in weight and measure than if the vine had not been shortened-in. Tomatoes are also several days earlier by this treatment, and therefore bring a much higher price in the market.

Lima bean vines are usually suffered to wind themselves round a pole twelve or fifteen feet high, and before the vine reaches the top of the pole, some beans, near its bottom, are already of a size to be pulled. Lima beans should be pinched-off when five and a half feet high, and they will readily throw out side shoots, well filled with pods, which will ripen before frost ; whereas, when not shortened-in, the beans on the upper end of the vine can not perfect themselves in time to be saved. It is unfair to expect a gill of sap to travel through forty feet of vine wrapped around a pole, and make a perfect bean at the extreme end of it. The immense amount of imperfect and half-formed vine through which it has to travel, causes too great an evaporation of moisture before arriving at its point of destination. The Lima bean, with us, is an exotic, and its behavior during growth is very different from its habits where native, and therefore the mode of cultivation, as with the tomato, peach, etc., must compensate for these differences.—*Working Farmer*.

#### Stowell Sweet Corn.

THIS new variety is most highly lauded in the East. After vain endeavors to procure some seed of the great novelty and desirable wonder, it was my good fortune to receive a small parcel, by mail, from my good friend Thos. Hancock, of the Ashton Nurseries, Burlington, N. J., to whom, for this and many other favors, my thanks are returned.

Though late, it was carefully planted in a sequestered moat, separate from other corn, so that its product may continue pure and unmixed. The following mention of it is from the *Working Farmer*, whose editor,

Professor Mapes, has previously mentioned it with high praise. Those who agree that Sugar corn is the only kind fit for table use, will welcome a variety of it that may have its season thus prolonged into the winter.

This is a new sort, and is every way superior to any other we have seen ; for after being pulled from the ground, the stalks may be placed in a dry, cool place, free from moisture, frost, or violent currents of air, (to prevent drying,) and the grains will remain full and milky for many months. Or the ears may be pulled in August, and, by tying a string loosely around the small end, to prevent the husks from drying from the ears, they may be laid on shelves and kept moist, and suitable, for boiling, a year or more. This corn is hybrid, between the Menomoney soft corn and the Northern sugar corn, and was first grown by Nathan Stowell, of Burlington, New Jersey. We purchased from Mr. S. a small number of ears dried for seed, and he presented us with a few ears surrounded by the husks grown in the previous summer ; the inner leaves were in as green a state as when pulled the previous August. Near the close of the late fair of the American Institute, we presented the managers with two ears pulled in August, 1849, and twelve ears pulled in August, 1850. They were boiled and served up together, and appeared to be alike, and equal to corn fresh from the garden.

The ears are longer than the usual sweet corn, and contain twelve rows. To save the seed, it is necessary to place them in strong currents of air, freed from most of the husks, and assisted slightly by fire heat, when nearly dry. In damp places, this corn soon molds and becomes worthless. The seed, when dry, is but little thicker than writing-paper, but is a sure grower. The stalks are very sweet and valuable as fodder.

#### Flowers and Fruit for Cities.

CAN not friends in the country be induced to take more pains to supply the city with flowers ? As soon as the wild flowers begin to bloom, and as long as they continue, why can not children or others gather them, arrange them in small and pretty bunches, and bring or send them to market ? What we

want are bouquets 3, 6½ and 12½ cents each. It would be more profitable to procure, do them up, and sell them at those rates, than to deal in dandelions, berries, or any of the common country contributions. There need be no fear of overstocking the market. Thousands of persons would gladly avail themselves of such an opportunity of enjoying flowers at an easy rate.

Not only would all the wild flowers command a ready sale; the demand would increase with the supply. Common garden flowers might be added. Many a family in the vicinity would do well by cultivating every variety, and forwarding low priced bouquets to the city. Our great middle class (in respect to pecuniary means) of citizens, who have a taste and love for flowers, are now almost wholly debarred from the possession of them by the limited supply and the consequent exorbitantly high prices demanded. If the whole neighboring country were made a garden, and its sweet, beautiful productions were showered daily upon the city, what a blessing it would be.

Look at the waste land within ten miles of the City Hall; look at the idle hands in and around Boston; and say, can nothing be done to bring the two together to the clear advantage of both, and for the benefit of everybody and everything else?

What we have said of flowers is equally true of fruit. Every variety of God's gifts, in the forms so agreeable and refreshing to our appetite and our well being throughout the summer, might be enjoyed by all classes, as they are now by a few, were the cultivation of them extended, as it should be, and the city favored with a greatly increased supply. We hope a better day is coming in these important particulars. A community abundantly supplied with flowers and fruits would have a great deal to be thankful for. The steps that may lead to such a consummation are worthy of attention.

*Boston Transcript.*

**REMARKS.**—True, how true! these best blessings, flowers and fruits should indeed be plentifully supplied to the brick-cased, dust-fed denizens of our cities, many of whom can see or enjoy scarce one of the great elements, and that but darkly, or only when the great fountain of light rides the

meridian and is able to pierce the murky air that hovers above the self-doomed multitude. Dirt may be plenty enough, but earth is hid, and water can only be obtained at second hand.

In our own city we already have a great abundance of bouquets offered daily in our markets, and at very low prices, but the suggestions of the Boston Editor are worthy of consideration. In New York, also, it appears from the papers, they are driving a brisk business in the floral way. Why may we not increase this simple enjoyment among the people? Why are there not baskets of simple little cheap bouquets at our railroad stations? The possession of a flower would aid to while away the tedium of travel.

Few persons are aware of the extent to which this traffic is carried on, and the large sums that have been realized by it. The nosegay season is at its height just now, and we doubt not that the daily sales of flowers in this city amount to some thousand dollars. One of these floral peddlers, we are informed, has amassed nine thousand dollars by the sale of bouquets in the course of the last few seasons.

#### Potato Rot.

"Who shall decide when doctors disagree?"

**DR. WARDER:**—As your work bears the title of Horticultural Review, allow me to review an article in your July number, page 456, headed "Rot in Potatoes," etc.—It was copied from the Albany Cultivator, the editor of which chastises the editor of the Massachusetts Ploughman for giving it as his opinion that insects are the cause of the potato disease; and the editor (of the Albany Cultivator) asserts that "all parts of the potato plant have been often examined by the most powerful glasses in existence without finding any such insects."

No one can claim much credit for earnestly desiring the elucidation of the truth, who can treat with contempt the opinions of

others merely because such opinions differ from his own. And if this be true in ordinary cases, it derives especial force in reference to this, in which the protection and preservation of one of the most useful vegetables is under consideration. Treat it with derision or contempt, who will, the question itself neither gains nor loses by this conduct, although this may be done by persons who are in a position to have made observations for themselves which would, perhaps, have led to opposite conclusions.

If the editor of the Albany Cultivator is ignorant of the fact *that insects have been discovered on the potato plant*, and are the cause of the disease attributed to them, I would beg leave to call his attention to the following work on this subject: "The Potato Plant, its uses and properties, together with the cause of the present malady, the extension of that disease to other plants, etc.—by Alfred Smee, F. R. S. Illustrated with 10 Lithographs. London: Longman & Co. 1847."

It is a book of 170 pages. Chapter xi is devoted to the description and history of the insect, *Aphis vastator*, which, it is said, "comes upon the potato plant in the winged state, and then brings forth its young alive. After a short time the insect brings forth other young, which young themselves reproduce without any connection with the individuals of the other sex; and thus from a single specimen a plant may speedily become covered with insects. It has been proved by Reaumer that in five generations one *Aphis* may be the progenitor of 5,904,900,000 descendants, and it is supposed that in one year there may be twenty generations. I know no reason why the *Vastator* should be less prolific than its congeners. The *Vastator* begins at the larger leaves of the potato plant, which after a short time becoming injured by the obstruc-

tion of the sap, die either partially or entirely. In this case the insect follows up the leaves till only a few on the top of the plant are left." In paragraph 281 he speaks of the migratory habits of the insect, etc.

On the evening of February 6, 1847, Mr. Smee gave a soiree at his house in Finsbury Circus, London, to between two and three hundred of the leading scientific men, an account of which was inserted at the time in the Morning Advertiser, the Sunday and Morning Post. Specimens of diseased potatoes and plants from three counties in England were exhibited—from Hampshire by the Right Honorable Speaker of the House of Commons, from Bicton Gardens in Devonshire, (Mr. Barnes, gardener,) and from the hot-houses, Peterborough House, Fulham. This last was growing, or rather dying, in a pot, and the *Aphis vastator* was feeding upon it. An extensive collection of plants killed by the *Aphis vastator* were shown, and the insect itself in all its stages exhibited by the microscope, twenty of the best instruments manufactured by Ross, Horne and other celebrated makers, being used for that purpose.

So much for the editor of the Albany Cultivator's assertion that all parts of the potato plant have been often examined by the *most powerful glasses* in existence without finding any such insects. Burns says:

"Facts are chieft that winna ding,  
And canna be disputed."

I am, sir, yours, etc.,

RICH'D DAVIES, *Landscape Gardener.*  
LEBANON, Ohio.

RASPBERRY JAM.—Mr. P. S. Church, at his farm, twelve miles below the Sault, on Lake Superior, is doing an extensive business in gathering and preserving the red raspberry. Recently the Indians of that vicinity brought in a barrel and a half of berries, and he has already made and put in jars about 1,000 pounds, and expects to make as much more before the season is over.—*Exch.*

## Vegetable Physiology.

### WHY DOES SAP RISE IN TREES?

THERE appears to be a repugnance against inquiring into nature's laws. The words *vital principle* are used by vegetable physiologists, as electricity is sometimes used by natural philosophers, namely, to wipe up a want of accurate knowledge as to causes and effects, and to attribute everything not understood, to some poetical word expressive of undefined thought. We are willing to admit that some of the causes for the rising of sap in trees and other plants, may neither be known nor understood; but so many are known, and their operations have been so minutely considered, that we see no objection to attributing the whole phenomena to such natural laws as we are acquainted with, provided they seem to be sufficient to render the whole fact clearly understandable. We will state a few of these laws, and those who have read the series of papers in our volumes 1 and 2, entitled "*Course of Scientific Reading for Farmers*," will readily understand what we are about to present.

Capillary attraction has much to do with the phenomena, and will account, in part, for all the known results. By *capillary attraction* is to be understood that propensity which surfaces have for attracting any fluid medium; thus, if an inkstand be upset against the edge of a book, we catch the book up and shake it off as quickly as possible, yet still the ink will be found to have entered to a very considerable depth. This is due to the fact, that each leaf of the book has two surfaces; a great number of surfaces exert their power of capillary attraction at one time, and hence the ink passes deeply and quickly into the book.

If we place a thin material, with a proper kind of surface, in water, we shall find it rises on its surface slightly higher than the surrounding level of the water.

If a bundle of glass tubes of different sizes be placed in a glass of water, the fluid will rise higher in the smallest tubes, and simply for the reason that the smaller tubes have a greater amount of surface in pro-

portion to their area, than the larger tubes, and therefore the water following these surfaces rises to a higher elevation.

The thousands of openings in a cotton-wick, and the immense amount of surface of the ultimate fibers, cause the oil to rise in the wick of the lamp, assisted by other causes, which we shall hereafter explain, and each of which is applicable to the rising of the sap in plants.

If we blow over the top of a bundle of glass tubes, the lower end of which is inserted in water, we shall find that the water will rise much higher in the tubes, than when the air above is in a comparative state of rest. We may view the tree, then, as a bundle of such tubes, and that the capillary attraction due to the surface of each ultimate tube of the tree, is assisted by every breath of air blowing past the surfaces of its leaves.

A certain space of time is necessary to enable substances in contact to let go of each other, and even great force and rapidity of action will not overcome this tendency. If we draw a polished cone of glass upward, its point having been previously inserted in water, at a speed of ninety miles per hour, we shall raise a column of water equal in size to the diameter of the cone at the point of immersion. This fact being borne in mind, will help to illustrate some of the phenomena we shall offer.

As bodies increase in size their capacity for heat is also increased; thus the moisture evaporated from the surface of a tree, in the form of vapor, occupies more than seventeen hundred times the bulk which it occupied when resident in the leaf, and is capable of secreting, in the form of latent heat, more than seventeen hundred times as much heat as before its volatilization, and, therefore, robs it from the nearest hot object, the leaf. The amount of gases and air confined in each leaf are condensed, producing a partial vacuum in each infinitesimal tube, and hence they give rise to an

accelerated motion of the fluids and gases resident in the trunk and roots of the trees. These in turn, by their accelerated travel, cause the spongioles, so minutely distributed through the soil, to seize new particles of moisture in their vicinity, and to induct them into the line of travel. These, of course, increase the soluble materials of the soil, such as the organism of the tree is capable of selecting. The continued superior heat surrounding the upper surface of the tree, the partial vacuum created at the termini of all the capillary tubes by the moving atmosphere, and the other causes which we shall describe, appear to be fully sufficient to account for the whole of the phenomena.

If a wheel be rapidly revolved, and a stream of water be continually poured upon its hub, or the center, it will follow the line of the spokes and be thrown off at the periphery, and this is called centrifugal or center-flying force; and every sheep or dog on leaving the water, makes partial gyrations, and thus throws off from the surface of his skin the excess of water. If we place one end of a rattan or a corn-stalk in a basin of water, and move the upper end rapidly to and fro through a considerable distance, while the lower end located in the center of the basin has but a slight motion, this rattan represents one of the spokes of the wheel we have described, and the water, from centrifugal force, will pass through its whole length and be ejected at its upper end. The Hungarian pump is but an enlargement of this principle, and every tree, and indeed every leaf of a tree may be considered as an Hungarian pump, bringing continually, by centrifugal action, such supplies of moisture to all parts of the surfaces of its foliage, as its roots are capable of embracing. Another action, called *endosmose*, contributes largely to the ascent of the sap, and although the following description of this action may not be strictly philosophical, it will at least render it understandable as applied to the purposes intended. If a glass tube, closed at its upper end and open at its lower end, be covered with an animal membrane placed between two pieces of wire gauze, and be filled with atmospheric air, under a pressure of even five or six atmospheres, and then the lower end be immersed in carbonic acid gas, the following

action will take place:—Although the ultimate pores of the animal membrane are too small to admit of the egress of the atmospheric air, still they are large enough to admit the ultimate particles of the carbonic acid gas to pass through them, and to occupy these spaces which still continue to exist in atmospheric air, even when under this great pressure, and for the same reason that peas will run among cannon balls when held in a vessel, or small shot between peas, or water between small shot, the smaller particles of carbonic acid gas will enter this tube and go to increase its weight.

Every one understands that water will find its level, and that when a hole is bored in a valley, the pressure of subterranean streams, having their origin at higher points, will cause the water to rise not only to the surface of the ground, but sometimes to eject several feet into the atmosphere.

The propensity to find its level exists with carbonic acid, and other gases which are heavy and occupy a lower stratum in the atmospheric ocean. These, in exerting themselves to find their level, rise up through the capillary tubes, as does the water in the Artesian wells, and the *endosmose* we have before described, lends its assistance to accelerate this action. A portion of these gases entering the lower end of a capillary tube of a tree, like a bubble of air in a cistern of water, continues to rise, and its accelerated movement is increased at each increase of temperature, carrying with it in its rapid travel, not only a portion of water in the form of vapor, but forcing ahead of it perhaps a quantity previously occupying the capillary tube.

The experiment we long since recorded of the cutting off of a grape vine in spring, and covering the cut end with an India rubber bottle to prevent the healing influence of the atmosphere on the incised end, goes to prove the latter facts we have stated; for notwithstanding that the pressure on the bottle may be adequate to a pressure of twenty pounds or more per inch, still it will fill with fluid and be distended by the up-rising gases, until it will eventually burst.

All these agencies seem to be necessary to carry out the phenomena of the sap rising in plants, and to insure a decrease of temperature, from the causes we have before explained, in soil surrounding the immediate

roots, to condense new portions of moisture from the air circulating in the surrounding soil.

With such facts before us, so simple, and so readily to be understood, we are disinclined to attribute the whole of the action to the words *vital principle*. We dislike mystery, and admire simplicity, whenever it travels hand in hand with truth.—*W. Farmer.*

#### Functions of Leaves.

THE sense of the beautiful in every beholder receives an exquisite gratification, in gazing upon the foliage, the mantle of living green, in which the vegetable world is arrayed during the season of growth and development. Few, however, are aware of the important functions which those countless leaves perform, in the growth of plants. To the common eye, they but appear as the lavish ornaments which beautify the vernal landscape, and invest each tree and shrub with a garment of loveliness. Their secret but vital functions are disclosed, only, to the eye of science. They are to the plant what the lungs, the stomach and the skin are to the animal. It is through them that the important functions of breathing, digestion, and perspiration are accomplished. Plants, like animals, breathe, digest their food, and throw off their surplus moisture, and perhaps a portion of the substances contained in their fluids, by perspiration; and those vital operations are all performed by the leaves which adorn them.

The *sap*, which is absorbed by the roots, constantly ascends up the vessels of the plant, during its growth, to the leaves. Here it undergoes a change, analogous to that effected in the food of animals, in the process of digestion. The superfluous water is thrown off by the perspiration of the leaves; while that which remains is converted into the juice, called the *true sap*, which, like the blood of animals, in its after circulation, furnishes the various substances found in plants.

The leaves, as intimated, are the perspiratory organs of the plant. The office of perspiration or transpiration is performed by the under side of the leaf, and may be almost entirely stopped by spreading varnish on that surface. The quantity of moisture thus thrown off is much larger during

the day than during the night. Dr. Hales found that a cabbage transmitted daily a quantity of water nearly equal to half its weight.

The leaves of plants absorb from the atmosphere carbonic acid, in the form of gas. This acid is a combination of carbon or charcoal with oxygen, one of the constituent gases of the atmosphere. The acid is decomposed, the carbon being retained by the plant, and composing a large part of its substance, while the oxygen is emitted. The absorption of carbonic acid takes place in the light, the influence of which is essential to the process. This fact explains the phenomenon that plants cease to grow, and that they languish and perish, when deprived of light. It is ascertained that trees derive a large portion of their carbon or woody substance from the carbonic acid absorbed by their leaves from the air. Van Helmont planted a willow, which weighed five pounds, in a pot containing two hundred pounds of earth. This he watered for five years, and, at the end of that time, the tree was found to weigh one hundred and sixty-nine and a quarter pounds, while the earth in which it had stood was found to have lost only two ounces. From whence did the tree derive that large mass of carbon which constituted the chief portion of its increased weight? Undoubtedly from the atmosphere—the carbonic acid absorbed by its leaves: the water, with which it was supplied, holding a portion of carbon in solution, may have furnished a part of it; but the carbonic acid of the air must have been the chief source of supply.

Plants, during the day, emit oxygen, the vitalizing element of our common air, through their leaves. This is derived from the carbonic acid, as it is decomposed; for vegetables are found not to emit oxygen unless carbonic acid be present.

During the night the leaves of the plants absorb oxygen, and form with it carbonic acid, a part of which they emit, and a part is retained.

By this process of absorption of carbonic acid by the leaves of plants, the atmosphere is purified of that portion of it which, in the form of gas, is so noxious, and, when concentrated, so fatal to animal life, it being the noxious air found in deep wells, and which arises in the fumes of burning char-

coal. Thus is this substance in nature—breathed into the atmosphere from the lungs of myriad animals, and diffused from the decomposition of animal and vegetable substances, and which, if not diminished, would render the air we breathe unfit to sustain life—absorbed and converted into the firm substance of innumerable trees and shrubs, while its oxygen is returned to the atmosphere to revivify it.

Finally, the leaves of plants absorb water, as well as carbonic acid and oxygen. It is found that a plant which is dying for want of moisture at the root, will revive and grow, when a branch with leaves is placed in a vessel of water. A beautiful illustration of this fact is also beheld in the renewed greenness of the leaves after a summer shower—the parched landscape appears to smile with gladness, as if conscious of the blessing it has received.

T. ATKINSON, *Ed. Ky. Cultivator.*

#### Source of the Nutritious Property of Vegetables.

THE nourishing property of corn, wheat and other grains, is owing to the gluten contained in them. And this gluten consists, in great part, of nitrogen. It is of course an important object with the farmer, to increase the proportion of gluten, and that is done by supplying additional nitrogen in the plant. Carbonic acid and water are the chief sources of *growth*. Nitrogen is the principal element constituting the nutritive quality. The atmosphere contains a large quantity of nitrogen. It is not supposed to be taken up by vegetables, however, from the atmosphere, in its simple form, but, by combination with hydrogen, in the form of ammonia. By the digestion of the ammonia, the nitrogen is afterward separated in the plant and used to constitute the peculiar product, gluten, to which its nutrition is owing.

Ammonia is produced by the decay of most animal substances. In this way it is that the application of manures is so beneficial to plants;—by the supply of ammonia furnished, which, being digested in the plant, results in a separation of nitrogen, which enters in the tissues of plants and produces their nutritive quality.

Ammonia is readily absorbed by water, and the rains and dew become impregnated

with it, and it is thus administered to vegetables, in small quantities. This may be sufficient for their existence and ordinary growth. But a greater supply of ammonia is necessary to some plants on account of their peculiar economy. This is the case with all plants containing much gluten. And this substance may be greatly increased by a liberal supply of manures from which ammonia is more abundantly provided.—These plants can therefore only be cultivated advantageously by a free application of manure, or otherwise an equivalent provision of ammonia in another form. Corn ordinarily, when raised in vegetable mold, contains nine and a half per cent. of gluten; but raised on land manured with blood or urine, has been found to contain thirty-five hundredths of gluten.

Gypsum has the quality of absorbing ammonia from the atmosphere, and yielding it again to water which may soak through it. This is the mode in which gypsum has a beneficial action on vegetation, while the gypsum itself held in solution in water is considered to be injurious.

*New Eng. Farmer.*

#### Effects of Extreme Cold upon Vegetation.

REPORTS from various parts of the country establish the fact that the severe cold of the late winter has proved destructive to many fruit trees and plants. When we say *the severe cold*, we do not mean to declare that it was the *intensity* of the cold in itself that has proved so fatal, for that we do not pretend to know. The question still remains an open one, and demands the careful investigation of those best able to settle it.

*Is it the intensity of cold that has killed the trees and plants?*

It is said that the tree becomes frozen so hard that the sap vessels are burst, and that causes its death. There are not many winters in New England so mild but that the trees are all frozen so solid that logs from them may be split almost by a single blow of an ax from an athletic arm. But this does not seem to have been a sufficient condensation of cold to injure trees, or we should have lost them all. If they could not withstand this degree of freezing, they would soon become extinct. They not only withstand the lowest temperature that occurs in

this latitude, say from sixteen to twenty degrees below zero, as the lowest point, but in the neighborhood of the arctic regions they live and grow to an enormous size.

Sir John Franklin (whose sad fate is universally lamented) in his overland expedition to those regions, between the years 1823 and 1827, wintered where the strongest brandy froze solid in a few minutes upon exposure, and the ink with which he was writing frequently froze upon his pen, although using it immediately before a huge fire of logs:—and yet in a climate giving this intense, long-protracted and appalling cold, he gives an account of trees growing there whose circumference is larger than any we have ever heard of elsewhere.—These trees, according to his statement, attain a height of from one hundred and fifty to upward of two hundred and fifty feet, varying from *twenty* to nearly *sixty* feet in circumference; thus far exceeding

“The tallest pine  
Hewn on Norwegian hills to be the mast  
Of some great admiral.”

So it would seem that trees are not only able to bear this extreme condensation of cold, but to bear it through a long-protracted season of intense and unmitigated severity—coming out and growing freely through a great many years, and reaching a magnitude unparalleled in warmer climates.

That these trees were indigenous and suited to the climate, would not seem to argue anything in favor of such hardihood and immense growth, any more than that our trees and plants, being indigenous, should possess the same power to resist the effects of cold. Besides, in nearly all our winters, the degree of cold for a short period is as great as it was at any time during the last one. Winter before the last the mercury fell as low in this region (being about eighteen degrees below zero) as it did last winter, but without any injurious effect upon the trees and plants.

We are, therefore, led to believe that it is not the *intensity* of the cold that has caused the destruction daily witnessed among the trees and plants.

To what, then, may be imputed such wide-spread injury to trees?

Can it be excessive evaporation in early spring? Many trees are now dead whose

branches were full of sap and plump on the first of April, showing no indications whatever of the speedy death which awaited them, with the exception that blossom buds were found to have lost their vitality. Griffiths, in his *Chemistry of the Seasons*, says that plants are frequently “blighted” during early spring by dry winds, for when branches and leaves are first put forth they are extremely succulent, and part with water so readily that during a dry easterly wind this loss by evaporation can not be rapidly compensated for, by the capillary attraction of the roots. If such were the cause of the injury, it should prove so annually, for fierce winds prevail throughout New England for more than half the time during the entire spring months. If not to excessive evaporation, may the injury be attributed to the great and sudden changes which occur both in the autumn and spring?

Of late years the autumn weather has been mild and moist, and favorable to the growth of plants until a late period.\* The wood made during this time did not get perfected, and the result has been, that this growth is found dead in the spring on the quince, peach, apple and plum trees.

Does this late growth affect the general condition and health of other portions of the tree, or is there any probability that it has in any way been accessory to its death?

Changes of temperature in the spring are sometimes very great within a period of a few hours. Plants come forward in moist warm weather so that they show expanded leaves, buds are swollen and ready to burst, and the branches full of the ascending sap when the sudden fall of temperature takes place. Leaves that had come out turn black and die, and the tender and half-hardy shrubs perish with them. These are phenomena of annual occurrence, and familiar to most observers. But these changes, occurring after vegetation had fairly started in the spring, have not been supposed to prove destructive to trees of three or four, or even ten years' growth. That process seems to be one enveloped in mystery, and demands the attention of close observers and students of nature, to solve its workings. There are those among us who have

\* Such was not the case about Cincinnati, last autumn, when all the trees were remarkably well ripened.—En. W. H. Rev.



given a life of attention to these subjects, and now that they are prominently before the persons interested in them, it is hoped they will make their theories and observations known.

We have barely touched upon these topics, more with a view of eliciting facts from

those of vastly greater experience, than to express any decided opinions of our own. We hope our correspondents who have carefully observed these phenomena, will favor us, at an early day, with the conclusions at which they have arrived.—*New England Farmer*.



## Pomology.

### POMOLOGICAL MEETING AT UTICA, NEW YORK.

On Tuesday evening, several gentlemen interested in Fruit culture, met at Baggs' Hotel, where, on motion, W. W. Coppock, of Buffalo, was called to the chair, and J. A. Warder, of Cincinnati, Ohio, was elected Secretary.

The objects of the meeting having been stated by the Chairman, it was agreed to take up certain fruits.

The Winter Nelis Pear being brought under discussion, Mr. Barry, of Rochester, stated that he did not consider it desirable to cultivate it largely on account of its weak growth, and that, on young trees, it was frequently spotted and imperfect. Not to be grown on the quince. He considered it a fruit of high flavor.

Mr. Reed, of Elizabeth, N. Jersey, thought it a good pear, but frequently unsightly—not a good grower—took too long to make salable trees to be profitable to the nurseryman.

Mr. Hovey found it a vigorous grower, but

slender in its wood, grew as much in length as most kinds; so with the willow—it was slender, but made as much growth as other trees.

Mr. Elliott, of Cleveland, Ohio, said he found it a pretty pear—fair and good.

Mr. Coppock had eaten it when he thought it as good as the Seckel, very high flavored; concided with other speakers as to its growth, thrifty though slender.

Mr. Barry thought it was a weak grower.

Mr. Reed asked if it was not a scarce variety among nursery-men? and he argued that it was considered a poor and unprofitable variety to propagate.

Mr. Hovey stated that he had observed shoots of it as large as his little finger, and its habit was to bend, and instead of bending down, it gathered together above. It is one of the twelve varieties recommended at Boston.

Mr. Kelly asked what was a weak grower if Winter Nelis were not such?

Mr. Morse, of Cayuga Bridge, had fruited it for six years—it never blighted except some leaf blight—it is one of the most valuable winter pears. In relative numbers as planted in his orchard, it stands third, thus: White Doyenne, Gray Doyenne, Winter Nelis. It is very prolific. Hence, perhaps, the fruit is not so large as it would be.

Mr. Kelly asked Mr. Reed whether he had ever seen a large healthy tree of it in Europe.

In reply, he said he had not any experience with it except in this country; it was not a profitable tree to grow—dropped its leaves much—so did Flemish Beauty and many others here in the West, as he had just observed.

Mr. Hovey had not observed this effect.

Mr. Barry said the loss of leaves here this year might be attributed to the drought.

Mr. Maxwell and Mr. Morse stated that with them Flemish Beauty held its leaves well this year notwithstanding the drought. The chair asked Mr. Elliott how the Kirtland was sustaining its character?

In reply, he stated that it had been so freely cut for grafts it had not borne much.

The chair said that he admired its growth. He had shoots that were  $\frac{3}{4}$  inch thick at base and 3 to 5 feet long and branched, from buds set last year.

Mr. Hovey said there were so many good autumn pears that the Boston cultivators were a little cautious about the new varieties.

Mr. Barry asked Mr. Hovey whether he preferred the Winter Nelis or the Vicar of Winkfield? (*Le Cure*.)

In answer, he said to sell, the latter, to eat, the former, as he had never thought the Vicar good to eat; it is coarse and deficient in flavor. He should never plant it for eating, though it is ornamental, a good bearer, thrifty, and the fruit sold well; he should recommend amateurs to take one in a dozen

—but, he had known the fruit sold at 75 cts. per dozen and the Glout Morceau at \$3.00 per dozen at the same time.

Mr. Barry stated that if planting a very limited collection he should certainly include the Vicar—it was beautiful and ornamental. He thought many persons had been disappointed in the Glout Morceau, especially on young trees—a pretty good grower—retained its foliage well; healthy, but not an early producer, and the fruit did not always mature well.

Mr. Coppock thought it a good grower.

Mr. Reed coincided.

Mr. Hovey mentioned Mr. Vandyne's tree which had produced the fine premium fruit. Maria Louise was also grown by the same person and much admired.

Mr. Kelly mentioned that this was a common pear in the London market, but needed house ripening.

Mr. Morse said it varied in size—was not a strong grower in the nursery—was crooked, and late to bear.

The chair asked the third best winter pear.

*Le Cure* was agreed to stand next to Winter Nelis and Glout Morceau.

The Lawrence was mentioned as preferable—agreed to.

The Lawrence was stated by the chair, to have been a strong but twisting grower, even in spite of tying to stakes.

Messrs. Hovey and Barry both thought it a fine, straight grower.

Mr. Hovey observed of some Flemish pears that several, four especially, the Vis-compte de Spoelberg, Maria Louise, Frederick of Wurtemberg, and Passe Colmar, were apt to have a portion of small pears among them, that were worthless—he knew no American pear that was so.

Mr. Barry differed, and cited the Stevens' Genesee as being one. Dearborn's Seedling was also cited as having the same character.

Mr. Kelly thought there was an error in vogue, that the American Seedlings were more hardy—he had found it otherwise.

Mr. Hovey found that few American pears were tender, and few would do well on quince stocks. Indeed, very few of any origin will do as well as B. Diel, Le Cure, and a few others. Of two hundred foreign varieties, he knew of perhaps twenty-five, that did well on quince, and of sixty American kinds, he did not know the same proportion.

Mr. Barry thought we had not sufficiently tested the matter—but recently, attempts have been made to work American kinds on Quince—besides, the stock at first used was not good. We had many varieties, which did very well if properly managed, to preserve growth and not allow them to overbear themselves—must be judiciously pruned and well manured, and put into good soil.

Mr. Hovey said Dearborn's Seedling did not grow well after a few years, and he should dig up his specimen tree, as useless.

Mr. Reed thought he knew old trees of the Andrews, (American,) that continued to grow and do well, ten feet high.

Messrs. Maxwell and Coppock had large trees of Dearborn, (American) that continued to do well on quince—good foliage and growth.

Gentlemen were advised not to decide too hastily from insulated cases, for or against. Also, by Mr. Hovey, that much depended upon the stock; different varieties of quince were more or less adapted to the pear. This topic was then dismissed.

The chairman then asked what was the best early pear?

Messrs. Hovey and Barry named the Doyenne d'Ete.

Mr. Reed named Madeleine as earlier.—This was not found to be so in Rochester and Boston. The gentlemen from these

places, considered Madeleine the second best early—a good grower on pear or on quince.

The two best market cherries, early and late, were asked for.

Mr. Hovey named Early Purple Guigne and Downer—the original tree of which has borne every year except 1850.

Mr. Barry mentioned Early Purple and Belle Magnifique, if allowed to ripen.

Mr. Reed named Mayduke for early.

Mr. Hooker—Early Purple for early; and Downer.

Mr. Hovey admired the Sweet Montmorency as a very late sweet cherry.

Mr. Barry said it would not sell—had ceased to cultivate it.

Mr. Hovey said it sold at 50 cents a quart, from first to tenth of August.

Mr. Barry named the Merveille de Septembre as ripening in September, though dry and not large—he recommended it for amateurs. The question was asked—

Do the Ohio Kirtland Seedlings endure the climate of this region?

Mr. Barry was satisfied with Gov. Wood, Mary, The Doctor, and Cleveland Bigarreau. He had fruiting trees that were hardy, and good bearers. The first was the best cherry, and the last was the earliest.

The Elkhorn being up, it was stated by Mr. Barry, that, in dry weather it did well, it rotted badly in wet weather. It is a large hard fleshed fruit—peculiar horizontal growth and gray bark.

The chairman mentioned a fine prolific cherry, cultivated in Buffalo by Gen. Eaton, as the Bigarreau de Lyons, an imported tree.

Mr. Hovey, who had received it, thought it the Great Bigarreau—called sometimes, Ward's Bigarreau.

Mr. Coppock recommended it highly.

The Chairman asked for information regarding the Patriot Apple, and whether it is a good grower.

Messrs. Hovey, Barry and all, concurred in stating, that it is a good grower and an excellent early apple.

Mr. Maxwell also recommended it highly for cooking.

Some one called up the Oswego Beurre.

Mr. Hovey had it now in bearing. It was above average size, and bore and grew well.

Mr. Barry had some specimens on the trees this season, which promised well. He had received it first, from Mr. Allen's trees, which, it appears, bore very abundantly. It was a rich and delicious buttery pear.

Adjourned to meet next evening.

#### *Wednesday Evening.*

The same gentlemen and others, met at the house of Mr. Tracy, Genesee street, where they had been politely invited.

Mr. Coppock called the meeting to order, when the question of Budded and Seedling Peaches, was introduced by Mr. Elliott, who stated the three points of the question, as they have been asserted by different persons who had discussed this topic.

Mr. Tracy said that Utica was just north of the zone of the peach crop, and they could not be ripened except in sheltered situations. So with the Isabella grape.

Mr. Hovey thought from that circumstance, that the climate must resemble that of Boston. But ten miles south of that city, on the hills, the peaches ripened—though the mercury might fall to 15° below zero, still the wood had ripened well, and escaped the cold. He knew little respecting natives, but that when any died in the nursery, it was the first winter of seedlings, but the buds of next year's growth, after budding with choice varieties, ripened their wood well. A choice peach from Kentucky, was tender, and had done no good.

Mr. Coppock said that peaches and apples from a southern nursery, as from Ohio, had

suffered much at Buffalo—thought the tissues were of a loose character.

Mr. Hovey said that he had observed the same thing in pear-trees from Baltimore, they blackened on the south side.

Mr. Tracy said, that the impression respecting the death of peach buds at a temperature of —15° was losing its force.

Mr. Hovey coincided with him, in believing that it was the changeable, rather than the cold weather, that caused the difficulty. The January thaws were the source of injury.

Mr. Coppock thought it was owing to bright sunshine during cold weather.

J. J. Thomas, with thermometer at —13°, found, this year, about half the buds killed, and chiefly upon the sunny side.

Mr. Hooker had observed the protection of a mat, at Montreal, save a crop of peaches, on walls. He thought that the budded sorts, were merely a selection of good seedlings, and not necessarily more tender.

Mr. Barry thought that the finest fruits, even the seedling, might not be hardy, especially if nursed and highly cultivated.—The mere fact of its being a seedling, would not make it hardy.

Mr. Hovey coincided and remarked that such differences were observed in all collections of seedlings.

Mr. Tracy referred to two accidental seedling trees of twelve years old, exposed to the sun, that always bear crops of excellent peaches, in the city of Utica.

Mr. Hovey suggested that an experiment might be made easily, and the relative products compared. He had left a number to try, and he had never found a good one among them.

Mr. Thomas asked what budded varieties had proved most hardy?

Mr. Elliott stated, that, in southern Ohio, the Heath Cling was most certain; in Cleve-

land, the Orange succeeded best, even when common seedlings beside it had failed.

Bellegarde and Yellow Rare-ripe were mentioned by Mr. Hovey, also the Sweet-water and Old Mixon Free, but Crawford's Early, equally exposed, did not produce so well.

Mr. Hooker mentioned the Yellow Alberge.

Mr. Morse, at Cayuga Bridge, thought the Jaques Rare-ripe was most certain, also the Yellow Alberge. Next, the Red Magdalen (a certain bearer,) and the Washington Free. Serrated Early York not so good.

Mr. Thomas found Fay's Early Ann a certain bearer. White Imperial bears well this year.

J. J. Thomas proposed that we make a list of pears that succeeded on quince, and named the Louise Bonne de Jersey, Glout Morceau and Le Cure. Mr. Hovey added the Beurre Diel. Mr. Coppock named the White and Gray Doyenne. Mr. Barry named Duchesse d'Angouleme; J. J. Thomas concurred in this. Mr. Barry in Europe found it among the oldest trees. Mr. Coppock named the Stevens' Genesee, which was questioned by others. F. R. Elliott named Napoleon. W. R. Prince named Capiaumont. Mr. Barry thought B. d'Am-anlis was one of the most successful, not even excepting D. d'Angouleme. Mr. Hovey named Easter Beurre. Mr. Prince, Soldat Laboureur. Mr. Barry named the Long Green and Verte Longue Panachée, as very beautiful on quince; also Henry IV, and Summer Francreal, which he thought would last a century. Mr. Prince named Doyenne d'Hiver Nouveau or Doyenne d'Alençon as good growers. Catillac was named. Mr. Prince named Uvedale St. Germain. Bergamot Cadet by Mr. Barry. Mr. Kelly named English Jargonelle. Mr. Hovey added, Beurre d'Anjou, Urbaniste, Doyenne

Boussock. Mr. Barry found Urbaniste was hard to raise for the first year, being so branching, did not get up.

Mr. Stone gave a little history of the Swan's Orange or Onondaga, which he thought might be traced to German origin, the translation of the original title being Dinner Pear, under which name it was long cultivated at Oswego before it was brought back as the Onondaga. Messrs. Barry and Hovey both thought the Onondaga had been originally cultivated in Connecticut, there lost, and re-appeared in New York. A very interesting discussion ensued upon the difficulty of tracing the history of some varieties; after which the party adjourned, very well satisfied that they had spent their time profitably in these interchanges of views.

#### Peeling and Not Peeling.

DR. WARDER: *Dear Sir*,—On page 558 of the September No. of the Review, there is an article of three paragraphs, containing not less than five or six positive falsehoods.

1. It is not true, that I ever stated that "only by peeling off the bark of my cherry-trees I was enabled to save them."

2. It is not true, that I ever stated that "I intended to rasp off the bark of my pear-trees, with the expectation that it would add to their vigor."

3. It is not true, that I have ever said that my method of "destroying the curculio is, to bore a hole, and fill with sulphur, and seal with wax."

4. It is not true, that I ever "proposed to get rid of the pear-blight by boring similar holes and filling with quicksilver."

5. Nor is it true, that I ever proposed to remove either bark, leaf, or limb from any tree whatever, as a curative process, except such portions as were either dead or diseased, or the obvious cause of disease—on exactly the same principles that analogous removals take place in the human subject.

6. It is not true, also, that I have ever applied or recommended the application of "cinders, copperas, lime, etc., to any sort of trees, to increase their vigor," as intimated in said article.

Indeed in the sense, and the only sense, in which the readers of the Review will understand it, the said article is false, from beginning to end—grossly and slanderously false.

Now, I care little what falsehoods Mr. Hovey may choose to utter about me or any of my friends; but I do not like it that you should stand as their apparent author, (as you will, in this case, with many a careless reader)—nor yet as their indorser. You will therefore, I trust, do me the justice to insert this correction in your next number. As to Mr. Hovey, he may “quit his garden and take refuge where there is no vestige of vegetation,” whenever he pleases; but unless he can pay a little more regard, if not to gentlemanly courtesy, at least to truth and decency, it would be quite well for the public interest and the advancement of knowledge, if he would quit his Magazine and “take refuge” somewhere, where veracity is of far less consequence than it is in this “blighted” but still green and hopeful world of ours.

Respectfully yours,

J. B. TURNER.

COLLEGE HILL, Sept. 15, 1852.

#### REMARKS.

I am very sorry that Mr. Turner should feel hurt at the article referred to, which was not credited by the compositor as it should have been, and went forth unaccompanied by the editorial note intended for it, but which was never written, because of indisposition. It is well for the Professor to set himself right upon these *dicta* which have been attributed to him, for we Western folks desire to be very orthodox in Horticulture. Would that he would oftener favor these pages with his practical observations and philosophical deductions, so that we might have the pleasure of presenting him directly and more correctly to the Horticultural world.

#### Analysis of the Strawberry.

In the Family Visitor, B. Kirtland gives the following analysis of the strawberry.—One hundred and sixteen grains of the ashes

of the leaves and stalks were used, immediately after a moderate crop had been taken off.

Silica,	-	-	-	6,117	grains.
Charcoal and Sand,	-	-	-	3,101	“
Perphosphate of Iron,	-	-	-	1,515	“
Perphosphate of Lime,	-	-	-	26,519	“
Magnesia,	-	-	-	9,908	“
Sulphuric Acid,	-	-	-	1,469	“
Phosphoric Acid,	-	-	-	6,970	“
Chlorine,	-	-	-	0,708	“
Potash,	-	-	-	33,154	“
Soda,	-	-	-	2,790	“
Carbonic Acid,	-	-	-	23,008	“
Organic matter and loss,	-	-	-	1,739	“

By the above, it will be seen that the strawberry contains a very large amount of potash—nearly one-third—and nearly as much of phosphate of lime and phosphoric acid.

The potash should be supplied to plants on sandy soils, or on any soil deficient in vegetable (organic) matter, in the shape of muck and wood ashes. The muck on being burned produces a large amount of ashes, which is mostly potash; and by the decomposition of this organic matter in the soil, though slower, the resultant products are the same. In the former case the decomposition is sudden and violent, and the gases, carbonic acid, oxygen, and hydrogen, escape into the atmosphere, and are lost; in the latter, the decomposition is slow, occupying years, and the gases are mostly taken up by plants and absorbed by the soil, so that but a small portion is lost. Muck is one of the best—we will venture to say, the *very best* absorbent and retainer of moisture and the gases, that the farmers of this state can employ—taking into consideration its nearness to every farm, ease of access and cheapness, (costing nothing but digging and hauling,) besides it is a powerful absorbent of heat. Dark colored soils are always warm soils; vegetation starts early, and grows rapidly on such soils, the philosophy of which may be explained at some other time.

*Phosphate of Lime*, (Phosphoric Acid, properly,) is the material which constitutes the bulk of all bones. Cow dung contains ten per cent. of this substance; horse dung five per cent. For the purpose of supplying phosphoric acid to this fruit, the former may be used; but as it is a cold manure,

half the quantity each of horse dung and decomposed muck should be mixed with it. Mingle well with the surface. One hundred and fifty parts of human excrements contain, according to Berzelius, of phosphate of lime, phosphate of magnesia, and gypsum, one hundred parts. A small quantity of this is an excellent manure for this fruit. If well preserved, it is nearly as powerful as guano, and should in all cases be mixed with some dividing substance, such as muck, charcoal dust, or the earth from the bottom of coal pits, leached ashes, or mold from the woods, etc., some months before using. The other ingredients are generally found in sufficient quantity in all soils, or will be supplied by the use of the above named substances.

#### Nursery Apprentices.

THE propagation and culture of fruit trees in the nursery, and the production of fruits in the garden and orchard, at the present time occupy the attention of a very large number of persons in the United States, and constitute a very important item in the general industry. To the majority of those embarking in it the business is entirely new, and they have everything respecting it to learn. The more experienced, even, have much more to learn than they imagine. It is by no means a simple thing—the work or study of a few weeks or months—that will make nursery-men, or a fruit grower, even. We not unfrequently hear people say they would like to send their sons to a nursery for a few months, to learn the business; and a man embarking largely in fruit culture, will sit down and address a dozen inquiries to a horticultural journal, expecting replies that will at once enable him to prosecute the matter successfully. Now, we wish to draw attention to these errors; the sooner people are undeceived in these matters the better it will be for themselves and the community. We are an apt people, to be sure; still we have to learn our alphabet before we read, and a certain length of time is necessary to learn the simplest mechanical art. Agriculture and Horticulture present a much wider field for study, and a much more embarrassing one, than any mechanic art; and yet, strange enough, few people are willing to believe that they cannot at once leave the

workshop or counting room, and become successful farmers, gardeners or nursery-men. How many are every year awakened from this delusion, by dear bought experience.—A few succeed; they are those who appreciate their want of knowledge, and go to work as zealous and earnest students,—like a man who finds himself in a foreign country, ignorant of the language spoken, and conscious that he cannot prosecute his travels with either pleasure or profit, until he has learned it. Such is exactly the position of the man who becomes a tiller of the soil, a grower of wheat or corn, a breeder of stock, a propagator of trees or plants, without previous study or preparation. Nature speaks to him in an unknown tongue; he is continually mistaking one sound for another; blunder after blunder confuses him; and he soon finds he must either leave her and return home to his old pursuit, or at once bend himself down with dictionary, grammar, and “first lessons,” to study her language.

We would have people look less lightly upon these pursuits. Young men especially, who aim at acquiring a respectable position in them, should go to work in earnest—begin at the beginning; and abandon the idea that a few months can be any sort of a preparation to enter upon this practice successfully. Those who aim at being nursery-men, should go and serve as apprentices for at least three or four years in the best establishment, where they may get a thorough training. To be able merely to put a tree into the ground, or set a graft or bud, is but a small part of the trade. The time is fast approaching when such acquirements will not do, they will not be sufficient to contend with greater skill, nor will they inspire the community with that confidence without which success cannot be attained. A sentiment is fast growing up against quacks or halfway workmen in any profession, and all such will find themselves run off the track. Reading, study, and observation, continually, are necessary in conjunction with every-day practice.

The growing season is the time to acquire information; everything is active, and yielding to surrounding influences. The effects of soils and manures, dryness and moisture; the attacks of insects and diseases; the habits, growth and bearing of trees; the ripening of fruits; the advantages of different modes of

propagation, pruning and training; and all the various treatments that trees and plants undergo during summer, should be closely

watched, and every result be seized upon and turned to account, for the guidance of the future.—*Genesee Farmer*.



## The Garden.

### DESCRIPTION OF NEW PLANTS. I

DR. WARDER,

*Secretary Cin. Horticultural Society:*

I SEND you below descriptions of two plants, which appear to me of sufficient interest to merit the attention of your society. If my descriptions do not establish two new species, they will at least aid in determining the name and place of two valuable plants, that I cannot recognize by any specific description within my reach; and I have carefully searched Don, Paxton, Knight, Lindley, Loudon and others.

The first is an *Amaryllida*, allied to *Pancratium*, and with which it is usually here confounded. My analysis will, I think, prove that it does not belong to that genus.

#### GENERIC CHARACTERS.

*Ismene* (of Salisbury and Knight.) Perianth tubes long, green, straight, *sub-triangular*, diverging; segments, spreading, carinate, lanceolate, petaloid, white, long as the filaments; cup regular, *elevated above the floral envelopes* on a short tube, and *separate from them*; filaments firm, distant, erect, partially conniving; anthers *straight*, quadrangular, furrowed, pendulous, introrse, versatile, *lower ends bifid, attached by the middle*; seeds large, round, or compressed by position, fleshy, convex externally.

#### SPECIFIC CHARACTERS.

Leaves linear, *spatulate*, rather acute, *not sheathing*; scape compressed, two-edged, glaucous, erect; *umbels two-flowered*; germ sessile, three-cornered, three-celled, membranous; cells, two and three seeded; spathe acute, withering; cup funnel-shaped, regularly toothed; style firm, erect, protruding, long as perianth, white shading to green at extremity; *stigma obtuse, inconspicuous*.

DESCRIPTION: Leaves erect, fleshy, fifteen inches long; scape springing from the center of six to ten leaves; flowers all white, fragrant, and very beautiful. Native of Tennessee; individual in possession of Mr. John Lea.

Some of these characters are not given by the authors I have consulted; and some you will observe differ essentially from existing descriptions, especially such as I have underscored. Its generic coincidence with *Ismene*, appears to me sufficiently well marked. It differs specifically from *Ismene Knightii*, native of Alabama, which has an *irregularly toothed rotate* cup, spotted segments, and ten to twelve-flowered umbels; with curved anthers. I think the plant an unnamed species of *Ismene*. Its separation from *Pancratium*, at all events, is well founded.



## DESCRIPTIONS

I have examined in the garden of Mr. William Orange, near this city, several specimens of this plant, which were obtained from the neighborhood of Evansville, Indiana.—They differ from the individual I have described, in that (as in *I. Knightii*) the umbels are many flowered (three to five) and the stamens are narrow and attached below the middle. Otherwise the plants appear to coincide. I think the number of flowers in the umbels an inconstant character, and the staminal attachment not a good generic one. The genus would appear to be synonymous with *Hymenocallis*; but if *Ismene* is well characterized, and our plants agree with it, would it not be well to adopt this last name? The characters I have given are intentionally more than distinguish the genus.

The other description is of a new *Leguminosa*, which though not remarkable for personal appearance, may have qualities that will entitle it to esteem. It has been called Japan Pea—but it is evidently a Bean.

### GENERIC CHARACTERS.

*Phaseolus*, (Linnaeus.) Calyx campanulate, bi-labiate—upper lips two-toothed, lower three. Corolla papilionaceous. Legume compressed, two valved, two-four seeded; seeds separated by cellular divisions; hylum conspicuous, oblong; stems herbaceous, branching, twining, leaves trifoliate, stipellate. Racemes axillary, pedicels one flowered.

### SPECIFIC CHARACTERS.

*Japanensis* (?) Stem pubescent, erect, terete, branched, leaves trifoliate; leaflets sub-deltoid, petiolate, pubescent beneath, rough, entire, mucronate; petioles quadrangular, tumid at base, terminal leaf bent up at nearly right angle with the petiole; peduncles short, racemose, many flowered; pedicels single; flowers small, white with purple center, vexillum reflexed. Legumes hispid,

pendulous, compressed, beaked, sub-falcate; seeds compressed, oval when green, pisi-form when dry; buff-color, unmarked.

DESCRIPTION: A rough, straggling looking plant, three or four feet high, requiring support; flowers inconspicuous, a large bearer, ripening its seeds late in this climate; enduring drought and heat, and requiring apparently no care; beans probably more valuable when dry than green. Said to have been among the stores of the Japanese vessel taken into San Francisco. Seeds brought from California by a gentleman of Alton, Illinois, and introduced here by Mr. Lea.—A new and undescribed species of *Phaseolus*.

Yours,  
JAS. W. WARD.

FLOWER BEDS.—Mr. Downing advises a lady subscriber to discard all her micellaneous flowers, and fill her flower beds with Verbenas, Scarlet Geraniums, Salvias and Petunias. They will stand the sun and dry weather, and make the garden gay at all times.

RAVAGES OF INSECTS.—The question is often asked, why is it that our fruit and forest trees are so much more exposed to the ravages of insects than they once were? The answer is a plain and evident one. There were more birds in those times than now.

For the last thirty years a terrible warfare has been waged upon birds, by every youngster that could handle a gun, and the consequence is that worms and insects have multiplied to the excessive annoyance of the farmer and horticulturist. Whether our present laws will ever restore the equilibrium, it is difficult to tell, but it will require years to accomplish it.

Hartford Conn. Courant.

What will not be effected by a good Osage orange hedge as outside protectors, evergreens and other shrubbery, with kind fostering care within?—Ed.



## The Vineyard.

### VINEYARD CALENDAR FOR OCTOBER.

FROM the third week in September to the middle of October, is the vine-dresser's harvest. His hopes of a good crop, or fears for a bad one, are now about to be realized. The season for injuries from *insects*, *mildew* and *rot* has passed over, and nothing is now feared but hail and early frosts; but such visitations, at this season, in our climate, are very rare.

The grapes before gathering should be *perfectly* ripe, *very* ripe, otherwise the wine will be weak, lacking flavor and aroma, and be in danger of turning sour.

It is better that the wine should be less in quantity, than inferior in quality. The extra price paid for a *good* article will more than compensate for the difference. The perfect maturity of the grapes may be known by their dark color, by the stems of the bunch near the stalk turning brown, by the saccharine matter in the berry, when pressed from the bunch, sticking to the finger, and by the seed being brown or dark in color.

In gathering grapes, two buckets should be used, one to contain the unripe or imperfect berries as they are picked from the bunch,—the other the perfect bunches thus cleared. The buckets are emptied into barrels or hampers, and carted or carried to the press-house. The further treatment of the

grape and the process of wine-making will be given in an article under that head in the November number. Nothing is to be done to the vineyard after gathering the grape crop, except to prevent washing from heavy rains, and to set up firmly any stakes that the wind may have blown over.

#### Cause of the Rot in Grapes.

DR. WARDER: *Dear Sir*,—I will tell you my experience in the culture of the grape-vine this year, having pruned the vineyard myself and taken care of it, with some assistance. Perhaps you will remember that it is planted on an elevation which has a gentle slope to a creek, at a little distance. The subsoil is clay, but heavy manuring has made the surface a rich mold. There are open drains at intervals of four rows. The vines on the borders of these drains were the most affected by the severity of the winter, although the injury was much less than was sustained by other vineyards in low situations, on the hill-sides. It is beyond the influence of fogs from the creek. This year it was spaded and hoed twice slightly. No application was made to the soil, excepting charcoal to four rows spaded in. The growth of the vines was very luxuriant, and the fruit promised finely, especially where

charcoal had been applied. The vines were not generally suckered so closely as is the usual custom, the lower leaf of the young shoot being left just above the bunches of the fruit to afford a shelter and supply any accidental loss of the leaves, which you well know are the lungs of the plant, and their healthy condition is indispensable to the ripening of the fruit.

Little insects of the beetle tribe appeared in small numbers in June, to feed upon the leaves, but I soon put them to death. They are easily caught in the morning. There was every appearance of perfect health in the fruit until the cold heavy dews came with the nights in June, succeeded by days with a burning sun in a cloudless sky. Then it was that disease first appeared. It assumed slightly different forms, sometimes a black speck, similar to the bitter rot in apples, appeared on the fruit and remained unchanged, presenting the same appearance now, but oftener spreading over the surface. Again, some of the leaves would shrivel as if exposed suddenly to violent heat, but without discoloration. The most violent and rapid action of the disease was when the fruit looked as if it had been dipped into hot water; the discoloration spread rapidly, and was succeeded by mildew, which would seem to be a secondary condition of the disease. In about ten days' time, more than half the fruit was destroyed; then the diseased action suddenly ceased. There was a change of weather, and the nights became warm and dry. The remaining fruit continued to be perfectly healthy about a month, until the cold nights, with their heavy dews, returned again and brought disease with them. Yet the destruction has not been near so great as in surrounding vineyards.

We have one vine growing in a stone pavement; it is trained to a high stake, with long canes trained around; it does not re-

ceive the early rays of the morning sun; it is covered with clusters of exquisite grapes, ripening earlier than the other vines, with only a few decayed berries on a branch overhanging some tomato vines. Limestone exhales no moisture, and the night dews are dried before the sun reaches it. There are other vines planted in a border well dressed with ashes for successive years. This year it had a surface dressing of charcoal around the vines, which are trained to a trellis eight or nine feet high. At one corner of the trellis is an Isabella vine, considered less liable to disease than any other variety. The morning sun shines fully upon it. Nearly all the fruit is destroyed. Along the same trellis are other vines, screened somewhat by trees from the earliest rays of the sun. Disease has appeared somewhat along the lower bars of the trellis, but on the highest bar the fruit is perfect, being screened by a natural coping of leaves from the sun. It is the same with a vine screened by the porch.

One more vine, and I have done:— This grows by a neighboring house close to the water spout which runs over, leaving it in a swamp. The ground itself is a cold springy clay; it trains itself into a peach-tree, and its berries are perfect.

From these premises the conclusion would seem that the cause of disease is to be found in the sun's rays striking the fruit while it is moist. When it is quite dry, no unhealthy action takes place. The only certain preventive will be to shelter the vines. The highest localities suffer least, because the atmosphere is less moist. In low places a malarious exhalation accelerates disease; therefore there is some advantage in training vines high and keeping the earth dry as possible. The native white grape, of which we have heard so much, is in bearing at last. It would seem to derive its name from

an unusually white bloom. It will ripen earlier than the Isabella.

I am, very respectfully,

S. O. NEALE.

MT. CARMEL, August, 1852.

#### Letter from Memphis.

##### GRAPES AND PEACHES.

DR. WARDER:—I have a few grape-vines which I pruned according to the direction of two of our naturalized citizens. I cut off the vine two joints beyond the last bunch; then plucked out the sprouts as the eyes burst, until at last they bloomed again, and my vines have now more young grapes than old ones. Have I not destroyed the next year's crop? I fear so.

I have a fine large peach, which ripens, of an ordinary season, from the 20th to the 25th of June. Two years since I budded some of them on the Chickasaw plum, for the purpose of dwarfing them. I have now two of those budded trees with fruit, and although the 2d of August, the fruit is not larger than the egg of a guinea hen, and perfectly green. Why is this? The plums are ripe, and why not peaches budded upon stocks of the same? Give me light if you please.

Respectfully,

BEN. W. JOHNSTON.

MEMPHIS, Tenn., August, 1852.

NOTES.—Your "naturalized vine-dressers" have given directions more in accordance with old custom, than as though they had possessed any knowledge of our soils and climates. A second blooming of the vine on laterals from young wood, is never to be desired, and may always be looked upon as an evidence that the summer pruning has been practiced with too much severity. Especially in the southern portion of our grape growing region do I urge the maintenance of a sufficient amount of foliage to elaborate the juices and to shade the fruit. For details upon this subject

you are referred to the Calendar of the Vineyard in this serial, prepared under the direction of the Wine Growers' Association, also to the second edition of Mr. Buchanan's work, "The Vineyards about Cincinnati." If you have grown some good canes, they will furnish your bearing wood for next year.

Your peach experiment is attended with very curious results. That the stock should exert a modifying influence, might have been anticipated; indeed, it is remarkable that so little effect upon the flavor is generally traceable to this cause; except in the dwarfed growth and prolific habit, little other change is observed, unless we defer to the pear which is modified by the quince. Let me hear more about your peaches, when they ripen.—Ed.

#### Life and duration of the Grape-Vine.

FRIEND PEABODY, the agreeable editor of that very useful southern monthly, *The South of the South*, has not only found pleasure to himself and profit, I trust, to his readers, by reproducing an article on Seedling Fruits from the Western Horticultural Review, but, while he seems to think us Ohians "a stiff-necked, unbelieving set of sinners" on account of our presuming to say that his continuous strawberry crops are out of the ordinary routine of the *Fragaria*, he also compliments us and we must thank him for his charity.

I thank him further for some excellent articles which are taken from his pages—especially the following, which, like everything relating to the grape, possesses a peculiar interest to our Catawba hills. In return for your telegraphed basket of strawberries, (which have not yet come to hand, would that I could telegraph you a hamper of our glorious Catawbas, fresh picked, and luxuriating in their unsullied bloom,

which like a delicate veil covers their deepened dye. Sorry indeed are we to learn that our favorite grapes are short-lived in some of the southern states, and right glad that you will see the necessity of trials to produce new varieties from seed. Our premium is open to all—try in your genial clime to reap the reward—we are anxious to have new and better sorts. But, be not hasty in adopting the *theory*, never yet substantiated, though very plausibly urged. It is not yet an *axiom*, that any individual variety "will run out."

However, do not fail to hybridize, plant seed, originate new varieties, prove them well, and let us hear the result of your labors.

The principle that all vegetable, as well as animal life, contains the seeds of life and death within itself, is now becoming one of the settled axioms of the age. And the stately, majestic tree, with the humble annual, like all animated nature, must go back to the dust from whence they sprang.—With a knowledge of these facts before us, we may account for the disease and death of most of the cultivated grapes in this region of the South. We hear complaints from Georgia, Alabama, Florida, and the Carolinas, that those standard Southern grapes, the Catawba, Isabella, and Warrenton, are so short-lived that they are not worth cultivating. In this immediate neighborhood we find they do not last more than about ten years. We have consulted old and experienced grape cultivators in this climate, and have been told there was something lacking in the soil; but surely this can not be all the matter, for the same results attend their culture on the rich prairie bottoms, the lime and marl formations, and the sand hills.

The grape-vine has ever been considered a long-lived plant, but, like everything else in nature, decay and death must come upon it. And no doubt the varieties which we cultivate, have nearly lived out their days. In all probability, every Catawba grape now in cultivation, sprang from one stock in North Carolina. What its age may have been when discovered, or whether disease had not already begun to prey upon it, it is impossible to say. The fact that there are

localities in the country where this disease has not yet made its appearance, is no safeguard but what it will come; for if in vegetable, as well as animal life, old age brings its own dissolution, no matter what soil the vine may at present be in, or whether propagated from a bud, cutting, layer or graft, it is a portion of the original vine still. Men sometimes hasten their dissolution by living in unhealthy localities—others prolong their lives beyond what is ordinarily allotted—but death is sure to find them. If we will have healthy, vigorous, and long-lived grapevines, we must start them from the seed.

For, the same reasons that we propagate from a bud, cutting, or graft, to get the good qualities of the parent stock, operate against us also in getting its decrepitude and decay. It may be years before another grape can be found which shall compare with the Catawba, but unless we try the experiment we shall not have even the semblance. We have done less, as a people, in originating new and valuable fruits, than any other civilized nation on the globe. And those superior grapes, the Catawba, Isabella, and Scuppernong, owe their world-renowned flavor, not to any art of our horticulturists, but a freak of dame nature in hybridizing.

The Ohio cultivators are pursuing the right policy. Her patriotic Longworth has offered a premium of one hundred dollars to any one who shall produce a seedling grape *equal* to the Catawba. How many thousands "yet to be," are interested in that experiment! Our own State Agricultural Societies should do likewise. How many families throughout our land now are compelled to go without their dessert of grapes, or glass of pure juice, that might have them in abundance, dispensing to each and every family the amount of the premium in the comfort and luxuries of the table! But, oh! the price of cotton is a sad drawback to our seedling fruits. Would that cotton seed were Catawba grapes, or strawberries; then indeed, might we get fruit at the South, unless they were so valuable to plant to make the *tree, silk, prolific multiboll* pods, that there would be no chance of getting them to eat. But, as men do not gather "grapes of thorns, or figs of thistles," neither can we gather grapes without labor.

Let every cultivator blend together the best varieties of grapes within reach by

hybridization, save and plant the seeds, and if he does not live to eat the fruit of his labors, some one will come after that may. Grapes will fruit from the seed in eight or ten years, and will flourish in any soil that will produce corn; but to yield their fruit in perfection, there must be a large amount of lime in the soil. Where this does not naturally abound, gypsum, ashes, etc., worked in the soil around the roots, answer a good purpose. That the grape roots delight in vegetable mold and moisture, no one can doubt when they go through our swamps and morasses and see the luxuriant vines suspended over nature's trellis work, loaded with their aromatic fruit.

We are no advocates here, for the close pruning of Europe; they dwarf their vines for the purpose of getting a greater number of plants on a given piece of land. With us that necessity does not exist. We can afford to give them plenty of room. We would prune out all dead and decaying wood, and keep the main vine within reasonable bounds. The art of pruning the vine was first discovered by seeing the wild asses of Helos browsing on the branches. Let us take heed how we imitate too close those *ancient Helots*. Nature has been a good teacher; we would not entirely discard her precepts. Wherever the vine is indigenous, there may choice fruit be originated. Southern cultivators! be up and doing. Nature has given us a few choice varieties—and as we see them gradually disappearing, shall we quietly fold our arms and smack our lips for other freaks of nature? Or shall we not rather profit by the lessons taught by that kind old dame—dive into the beautiful mysteries of botany—prove that all flowers were made, not alone for beauty and perfume, but that they are the ground work of all improvement and perfection in the horticultural, as well as the agricultural, line.—Learn how to hybridize—plant the seeds and test the plants. Some one may yet strike a Catawba, or perchance a Scuppernong.

#### Vineries at Boonville.

UNTIL our visit to Boonville we were not aware that so much attention was paid to the culture of the grape in that vicinity.—Almost every person has more or less vines, and there are a number of persons who have

several acres. We called upon Mr. Haas, who has about six or eight acres, and promised by the way, to visit him again before we returned; but found it inconvenient to keep our promise. He told us he expected to manufacture from 1,200 to 1,500 gallons of wine this fall. Hon. J. G. Miller, member of Congress from that district, has also several acres which we saw as we rode by his house. Mr. Miller has a delightful residence some two miles south-west from Boonville, and we learned pays much attention to horticultural and agricultural pursuits. Mr. Simpson, editor of the *Observer*, has some very thrifty vines at his snug little domicile, where, in the midst of choice fruit and beautiful and fragrant flowers, he nestles in his *bachelor's home*. Such a rural retreat ought not to be without "heaven's last best gift!"

Mr. S. informs us that there are many excellent grapes growing wild in south-western Missouri, which if cultivated he had no doubt would be hardier and produce as good if not better fruit than any of the cultivated varieties—not excepting even the Catawba. But these vines are being annually killed out. An efficient State Society or Board of Agriculture would bring these varieties into notice, and no doubt add largely to our list of cultivated grapes.

Mr. J. H. Myres has about two acres of Catawba and Isabella grapes; and of this vineyard we must say it was in the best order of any we have ever visited. Though only in its third year, many of the vines have formed clusters of grapes, and the whole were in a very thriving condition. We received invitations to visit several other farms where there were larger or smaller lots of vines, but did not find it convenient to do so. The people here do not complain much of the rot, and those who have had much experience in the business consider it very profitable.

Large portions of the state of Missouri are admirably adapted to the growth of the grape, and the day is not distant when this article will form an important part of our exports. With ordinary success it must be immensely more profitable than any of the field crops, and we recommend every family to begin at least, and raise a few just for the comfort of them, if for no other reason.

*Valley Farmer.*

## Rural Affairs.

### LANDSCAPE GARDENING.—PLANTING.

I SHALL resume the subject where I left off, in my last letter. I had given directions for thorough preparation of the soil for planting. What is the best season for planting, method of performing this operation, and future management of the trees and shrubs?

This is a subject to which I have devoted some attention, or I should hesitate to assert that, in a very great majority of cases, trees and shrubs planted early in the autumn—say the end of October or beginning of November—will have made as much progress at the end of the first season, as those planted late in the spring will have made in the second year; and as very much of the apparent success or failure turns on the right performance of this operation, and as no human care or precaution can compensate for the evils of late planting, I am the more desirous that due attention should be paid to the subject, in order that its importance may be generally known, and its true value rightly estimated. This effect is a result of a cause so natural as scarcely to require a passing notice, (were it not for the opposition evinced by some interested parties, when I brought this subject before the Cincinnati Horticultural Society for discussion—persons who, having very little nursery stock of their own growth for sale, are obliged to wait till they obtain their supply from the East and elsewhere before they can fill any extensive orders.)

I shall only remind your readers of the effect of placing the roots of a healthy tree in the earth while its temperature is but slightly reduced; the plant is at once sur-

rounded by elements in all respects congenial to its nature. The lacerated roots and spongioles submitted to a condition so favorable to vegetation as this, speedily repair whatever injury they may have sustained during the process of lifting and replanting, and not only do they repair their injured parts, but if some of the oppositionists to this practice will try the experiment *fairly*, they will find that fresh roots are emitted, and thus the plant during the first autumn, becomes established and prepared for vigorous growth the following season. This is especially the case with evergreens, but it is also true of deciduous plants, and experience has taught me, that plants apparently dormant and wholly without evidence of growth, and with entire absence of leaves, are capable of generating roots.

When compared with this, it will be found that in spring planting, the roots have to be submitted to the earth sometimes when it is too wet, and at a temperature too low to induce growth; the broken and injured parts do not so speedily heal, while the dry winds with a powerful sun, carry off the juices so rapidly as frequently to weaken, and in many cases to destroy the plant; or, thus weakened and debilitated, it is often injured and its vigor impaired for years.

Between these two periods for planting, no comparison can properly be instituted, as undoubtedly planting in the autumn is likely to be attended with the most favorable results, provided it is done early—that is, as soon as the buds for the next season are sufficiently matured, and the leaves (of deciduous trees) though not fallen, are yet

giving evidence, by their appearance, that their functions, as the agents in carrying on the process of assimilation, are nearly terminated. The earth at that period, notwithstanding coldish nights, still retains much of the heat absorbed during summer; and as heat is a principal agent in causing vegetable extension, so trees, planted at that period, will soon produce fresh spongioles, which will enable them to meet the demands made upon them by the expansion of their buds, and the exhalations of their juices in the spring and summer following.

This object will be still more completely effected by a proper mulching of the surface round the roots of each tree with either litter, tan-bark, or decayed leaves from the woods, which will prevent the escape of the warmth of the soil by radiation, and also preserve the moisture. The gardener knows, when he takes a plant out of the soil and transfers it to a higher temperature, that much of his success in producing flowers or fruit will depend upon his keeping the head of his plant in a low temperature at first, and subjecting the roots to artificial heat, so that new mouths may be formed for receiving nourishment, and thus the plant be enabled to maintain a relative action between all its parts. When its head or branches are likewise subjected to artificial excitement, it will be seen that those who plant early in autumn adopt a system exactly analogous.

At the season above named, commence making the holes in your trenched ground, dig them according to the size of the trees intended to be planted—always have them large enough not to cramp the roots. I always prefer young vigorous (nursery grown) trees to older ones. It is a mistaken notion to plant large trees for the purpose of embellishing pleasure-grounds. One reason is, they scarcely ever thrive so well as young trees; another reason, and a very important

one, is, you can get four, five, and in some cases a dozen of smaller growth for the same money, and in a few years, by planting others as nurses, they will make larger and more beautiful trees. If possible, you should see that the trees are carefully taken up in the nursery, and prune off all bruised and decayed roots, and replant them as soon as possible; be careful to spread the roots equally all around the tree; do not plant more than one inch deeper than the tree has been in the nursery. It is also necessary to look over the trees, and prune away suckers, and strong side-shoots; though pruning, in the general sense, is not advisable at this stage, as it tends rather to retard than accelerate vegetation. But more on this subject when I come to treat on the future management of trees and shrubs.

In planting, let the soil be in that condition in which it will easily crumble and easily break with the spade, neither too wet nor too dry, and let it be well broken before it is put to the roots of the trees; let the soil be well pressed round them. This is a point which can not be too strongly enforced in such operations.

In planting, as a general rule, I would adhere to a maxim my father used often to repeat—“*Plant thick, and thin quick.*”—The first is often enough done—the latter but little attended to; hence the miserable appearance some places present. After having seen a good deal done, and having had some little experience myself in transplanting single large trees for the ornamenting of park and pleasure-ground scenery, and giving them every necessary attention, I am fully convinced that the formation of a clump of *young trees* at the desired place, and planting a number of others as nurses to those destined to remain, they will ultimately, after the lapse of a few years, cause



the latter far to preponderate in strength, vigor, and beauty to the former. Of course, thick planting is only a relative term—six feet apart would not be too thick in some situations, and nine feet would be too close in others.

In formation of a plantation or a clump, it is desirable to fix at once upon the kind of trees you intend to remain and form the plantation or clump; you may then proceed and plant your permanent trees and shrubs first, and afterward fill up the intervening spaces with nurses. A plan of the manner of planting your permanent trees and shrubs should be preserved, and remarks made upon it, as to the manner in which it is intended to manage them in future.

I am aware that many who plant conceive their labor to be at an end when they have committed their trees to the earth, and that all after-culture is superfluous. This is a pernicious error, and is not less injurious to the young trees than it would be to sow a field of turnips or any other vegetable, and leave them to take care of themselves; or, in other words, not to apply any after-culture.

Others again may say, what a labor you make of planting and cultivating trees, when nature will do so much for herself by dispersing her seeds on the earth, where they spring up and produce timber! True, it is so; but the time nature takes to establish her young progeny and keep them out of harm's way, is such, that while she is producing trees only large enough for hoe-handles, art will furnish them sufficiently large to make masts for small ships. Much might be said on the performance of nature in this respect; but it is art we have to direct; and if these directions are faithfully followed success will be certain.

I shall close my present letter, and reserve my remarks on the further manage-

ment of trees and shrubs for another occasion. I am, sir, yours, etc.,

RICH'D DAVIES, *Landscape Gardener.*

LEBANON, Sept. 2, 1852.

#### Straw as a Covering.

Clean straw is an excellent covering for many things; thousands upon thousands of sea-kale in frames or under hoops have no other blanching material; and how clean they grow in it! Rhubarb, in winter forcing an early spring, grows beautifully pinky.—It is well known that early spring frosts destroy rhubarb; but if a six inch layer of straw is put on every crown, as the heads put up, they raise the straw with them, and it not only gives the stalks a better color, and makes them less "stringy," but it keeps the leaves from growing too large. No wind will blow it off, nor will the most intense frost injure the plants. Straw should not be looked on as a mere litter; it is as good as a frame upon a large scale. What sort of eatable strawberries would we have without straw? In summer, every crop, such as gooseberries, currants, and many other things, should have the protection of straw, which keeps the sun from drying up the surface, and the surface roots damp and cool, while all weeds are kept down. Market gardeners use it for their frames—it matters not whether for cucumbers, melons, or potatoes, straw is their covering,—and their crops are more secure than when protected by a tin mat. But some may object to the use of straw, on account of the litter it makes in a garden; but if any of those who object to its use for this reason will just take a peep into Covent Garden market at any season, they can not fail to be struck with the quality of the produce, in the raising of which straw plays an important part. Straw is also the best of all manure for a strong retentive soil, when it is dug in fresh, as it decays and leaves innumerable worm-like holes, which act as drains for the roots.—*Gardener's Chronicle.*

THE POSTAGE on this work, under the new law now in force, is 4½ cents per quarter, when paid in advance, as the excellency of the paper makes it weigh over four ounces; or, if not prepaid, three cents each No.



### THE CINCINNATI HORTICULTURAL SOCIETY,

Has kept on in the even tenor of her way within the past month. Weekly meetings, with exhibitions and discussions of fruits and flowers of the season, have afforded a pleasant recreation for the gardener and an excellent school for the tyro and amateur.

All the force and energy of the Society, however, has been reserved for the great Autumnal Exhibition, which is to close the month, and which will furnish many matters to be chronicled in the next number, to which the reader is referred,—as it would not answer to venture one's prophetic powers, by writing an advance history of unborn events.

#### The American Wine Growers' Association

Met at the house of Messrs. Corneau and Son, Latonia, on Saturday, Aug. 28th, 1852, Dr. Reh fuss in the chair. The minutes of the previous meeting having been read and approved, the following communication was read:

#### To the Wine Growers' Association:

GENTLEMEN,—I yesterday drank, at the cellar of Mr. Reh fuss, some of the finest Catawba wine I have ever seen, and superior to any former wine of his. He attributes it to a change made in his soil, from some necessary ingredients added to it. I trust you will give this matter early attention, and recommend our vine-dressers to make the experiment on a part of their vineyards, to test the principle. I have confidence in Mr. Reh fuss' skill, and if the result he anticipates is produced, he will be a great public benefactor. Yours truly,

N. LONGWORTH.

August 21st, 1852.

Discussion upon this was suspended until we should come to taste the samples.

Another communication from the same, referring to the best mode of mashing grapes, was referred to a committee of three, Messrs. Reh fuss, Mosher and Corneau.

The resolution of Mr. Yeatman, proposed at the last meeting, to abolish the annual fee or contribution, was taken up as the special order, and after some discussion it was adopted by the constitutional vote.

The lovely atmosphere, purified by the showers which have refreshed the foliage and increased the verdure of the turf upon the grassy slopes, courted the exercise of the locomotive powers of the members, and they sallied forth, examined the capacious pressing-house, well furnished with excellent machinery, presses of admirable construction, and the stemming and crushing apparatus. The vineyard was scantily supplied with fruit, having suffered much with the rot; but the plants indicated that judicious pruning had been applied in previous years, and there were no long stocks of old wood to deface its appearance.

Dr. Mosher's experiment of applying ashes to grape-vines having the yellow leaf was reported on by a committee who had examined them. They say that this portion of the vineyard, which was in the spring the worst looking with the sickly leaf, and to which about a half a gallon of ashes had been applied to each plant at the second hoeing, was now of the most healthy dark green appearance, with splendid foliage and beautiful wood.

Several copies of hydrometric tables, called Bennett's Guide, were laid on the table for distribution. This is a small pamphlet,

filled with valuable information. A vote of thanks was offered to the author for his liberal present. These are the same tables that were so highly recommended some months since by this Society. It was then moved by Dr. Mosher, that the President be authorized to purchase one of the best quality of Bennett's Hydrometers, and further, that a committee be appointed to make a critical examination of the instruments and tables, by comparison and trial in different liquids.

The two specimens of Catawba, 1851, by L. Rehfuß, were carefully tested together, and a critical comparison was instituted; from which it appears that the wine manured with potassa was much the riper, finer, and more agreeable than that of same vintage and which had received the same cellar treatment, but which was produced in a vineyard adjoining, not specially manured.

On motion, adjourned to meet at the Horticultural Hall, on Saturday, September 25, at 11 o'clock, P. M.

#### The National Pomological Society.

This national body, known heretofore as the *American Pomological Congress*, held its biennial session, as called by the President, on the 13th of September, in the upper saloon of the Chinese Museum, in Philadelphia. This large hall was extensively occupied by the very fine displays of fruits brought from several states; some collections of apples and pears contained hundreds of varieties; the largest were from the neighborhood of Boston, but some of the smaller collections embraced varieties of great excellence, and specimens of peculiar beauty. Of the latter, the apples and pears from Samuel Ott, of Pennsylvania, were remarkable as showing the effects of good culture, for the fruits of that neighborhood have been failing, and very imperfect for several years past. It will be impossible to particularize, but I must mention the extensive collection from our fellow-citizen, A. H. Ernst, of Spring Garden.

#### MORNING SESSION.

The meeting was brought to order at 11 o'clock, A. M., by W. D. Binckle, of Philadelphia, President of the American Pomological Congress, and the credentials of delegates were called for by the Secretary.

The Hon. M. P. Wilder, from Mass., moved that all gentlemen present, who take an interest in the science which it is our intention to promote, be invited to take seats in this Congress.

The President then read a beautiful and appropriate address, suggesting several points of action to the meeting, which must be omitted for want of space.

On motion of B. V. French, a committee of nomination was appointed by the chair, composed of the following gentlemen:—Hon. B. V. French, of Mass.; P. Barry, Esq., of New York; A. H. Ernst, of Ohio; Gen. Patterson, of Pennsylvania; and Edward Tahall, Esq., of Delaware; who, after retiring, reported the following ticket:

*President*—Col. M. P. WILDER, of Boston.

*Vice Presidents*:—Caleb Cope, of Pennsylvania; A. H. Ernst, of Ohio; S. L. Gooddale, of Maine; Col. B. Hodge, of New York; Lawrence Young, of Kentucky.

*Corresponding Secretary*—Thomas P. James, Philadelphia.

*Recording Secretaries*—F. R. Elliott, Cleveland, Ohio; James H. Watts, Rochester, New York.

Hon. B. V. French and Gen. Patterson conducted the President to the Chair, and the above named gentlemen were elected as officers of the National Pomological Society.

On taking the chair, Mr. Wilder returned his thanks in a neat address; after which Mr. C. Newhall, of Massachusetts, moved a vote of thanks to the retiring President, which was adopted by acclamation.

Mr. Cabot, of Salem, moved the appointment of a committee to prepare resolutions expressive of the sentiments of regret experienced by this body, at the death of A. J. Downing, Esq.; Cabot, Hancock, Cope, Warder, and Hodge were appointed.

The following persons were appointed Business Committee: J. J. Thomas, Samuel Walker, A. H. Ernst, Cleveland, and Pierce.

The Business Committee proposed for the action of the Pomological Congress the following subjects:

1. To revise the list recommended by the former session of the Congress for general cultivation.
2. To revise the list of rejected varieties.
3. To recommend such varieties as are worthy of general cultivation, or for particular localities.

4. To add to the rejected list such as are unworthy of cultivation.

5. To appoint a temporary committee of seven on synonymes, who shall sit during the Convention.

The Business Committee think it advisable, in part of their Report, to choose seven gentlemen, in order to form a committee to report on Synonymes, which was carried unanimously, and the undersigned gentlemen composed said committee: Messrs. Walker, Hovey, Barry, Young, Downing, Saul, Ernst.

The Committee on Synonymes of Fruit, have considered the subject referred to them, and would report (in part) that they recommend, in order to facilitate their duties, for further action, that all the members of this convention be requested to place in the committee-room specimens of all such fruits of which they have any doubt as to their true name. For the Committee,

SAMUEL WALKER, *Chairman*.

Thomas Hancock submitted the following, which was adopted:

*Resolved*, That a committee be appointed to report a Constitution and By-Laws for our government.

The following named gentlemen composed the said committee: Hancock, Brinckle, Peters, Barry, Young.

#### AFTERNOON SESSION.

The Society occupied the afternoon in the discussion of fruits, as suggested, revising the lists of former sessions. Several fruits were taken up and their merits canvassed; some were promoted, others degraded; for particulars the reader is referred to the pamphlet which will shortly appear and from which the lists shall be extracted.

In the evening the Society and the public listened with deep interest to the handsome eulogy to A. J. Downing, delivered in the Musicial Fund Hall, by M. P. Wilder.

#### SECOND DAY.

The Hon. M. P. Wilder called the meeting to order at 8 o'clock, A. M., and in accordance with the provisions of the Constitution, appointed the following named gentlemen to act on the undersigned Committees.

*Committee on Foreign Fruits*.—C. M. Hovey, Massachusetts; P. Barry, New York; Charles Downing, New York; J. P. Kirkland, New York; R. Buist, Pennsylvania;

S. L. Goodale, Maine; C. B. Lines, Connecticut.

*Committee on Native Fruits*.—W. D. Brinckle, Pennsylvania; F. R. Elliott, Ohio; E. Tatnall, Jr., Delaware; Thomas Hancock, New Jersey; Colonel Hodge, New York; H. P. Byram, Kentucky; Robert Manning, Massachusetts.

*Committee on Synonymes*.—J. S. Cabot, Massachusetts; J. J. Thomas, New York; A. H. Ernst, Ohio; J. A. Kennicott, Illinois; S. D. Pardee, Connecticut; A. Saul, New York; J. D. Fulton, Pennsylvania.

The Committee appointed to draft resolutions commemorative of the death of Mr. A. J. Downing, report that it is

*Resolved*, That this Congress sincerely lament the death of the late A. J. Downing, of Newburg; and, in view of his talents and acquirements—his labors and services in forming a correct public taste in all matters appertaining to high art—in promoting a love of Horticultural and rural pursuits, and in extending a knowledge of Horticultural science, that his loss cannot but be deemed a public calamity; and, as expressive of the sense of the members of this Congress at this melancholy bereavement, that the resolutions passed by the various societies in relation to that event, be adopted by this Congress, and published with its proceedings.

*Resolved*, That this Congress heartily approve of the action of its late President, Dr. W. D. Brinckle, in taking measures for the delivery of an eulogy on Mr. Downing.

A committee was appointed to nominate the remaining officers of the Society, who reported one Vice-President for each State, and for *Secretary*, H. W. S. Cleveland, of Burlington, N. J.; for *Treasurer*, Thomas P. James, of Philadelphia.

The chair then proposed as the Executive Committee the following named gentlemen: Messrs. Brinckle, French, Peters, Wendell and Warder.

Mr. Elliott moved that the President and Vice-President be ex officio members of this Committee, and that five members be considered a quorum. Adopted.

Mr. Saul moved that the Society proceed with the unfinished business of yesterday, which it carried into effect by a lengthened discussion on pears, plums and cherries.

The report of the Committee to prepare

names of the chairmen of the State Fruit Committees, presented the report as follows:

For General Chairman, Samuel Walker, Roxbury, Massachusetts. New York—P. Barry, Rochester. Pennsylvania—Thomas P. James, Philadelphia. Delaware—Dr. Lewis P. Bush, Wilmington. District of Columbia—Joshua Pierce, Washington.—Georgia—Stephen Elliott, Jr., Savannah.—Virginia—Yardley Taylor, Purcell's Store, Loudon county. Maine—H. Little, Bangor. New Hampshire—H. F. French, Exter. Massachusetts—Ebenezer Wright, Boston. Vermont—C. Goodrich, Burlington. Rhode Island—Stephen H. Smith, Providence.—Connecticut—George Gabriel, New Haven. New Jersey—Wm. Reed, Elizabethtown. Maryland—Samuel Feat, Baltimore. South Carolina—William Sumner, Pomaria. North Carolina—Henry K. Burgwyn, Jackson. Ohio—R. Buchanan, Cincinnati. Illinois—J. A. Kennicott, Northfield. Indiana—J. D. G. Nelson, Fort Wayne. California—Capt. F. W. Macondray, San Francisco. Georgia—Charles A. Peabody, Columbus. Florida—A. G. Sema, Quincy, Gadsden county. Kentucky—E. D. Hobbs, Louisville. Mississippi—Thomas Affleck, Washington. Iowa—James Grant, Davenport. Missouri—Thomas Allen, St. Louis.

The Committee on New Fruits, Mr. Elliott, made the following Report, which was accepted:

#### APPLES.

Jeffries: A roundish, flattened yellow ground, striped with red; sprightly, tender, juicy and pleasant. Regarded as "best"—ripe September.

Brennaman: Regarded as "good." Sept Willis Sweeting: Regarded as "very good." September.

Autumn Sweet Bough: Regarded as "very good." September.

Cox Seedling: From Joshua Embree. Not worthy attention.

Red Grove: From Joshua Embree. Regarded as "very good."

Myers' Apple: Imperfect specimens.—Worthy further attention.

Carter Apple: From Virginia—passed as in too imperfect a state to decide upon it.

Zimmerman: Regarded not worth attention.

Seedling, No. 3: From H. R. Robey, Virginia—passed as "good."

Green's Choice: From Mrs. M. A. Fulton; a handsome fruit—red striped, sweet; passed as "very good."

Howard: From G. P. Howard; regarded as "very good."

Richard: From E. G. Studley; regarded as "best."

Melt-in-the-Mouth: From Paschall Morris & Co.; regarded as "very good."

Robey's Seedling: From H. R. Robey; passed as "very good."

White Cain: From Joshua Embree; passed as "good."

White Queen: From Joshua Embree; regarded as valueless.

Birmingham: From Joshua Embree; regarded as "good."

Summer Cheese: From H. R. Robey; passed as unworthy.

Virginia Cat Head: A red apple unworthy culture.

Carnell's Favorite: From Joshua Embree; regarded as "very good."

#### PEACHES.

Muhlenberg Cling: From A. M. Spangler; regarded as "very good."

Petit: From David Petit; large, yellow, irregular, yellow flesh, sweet and fine.—Passed as "very good."

Seedling No. 1: From J. B. Baxter; white flesh, dull whitish green skin, juicy and fine. Passed as very good.

Susquehanna: From H. Randall; very large, yellow. Regarded as best.

#### PEARS.

Moyamensing: Regarded as "best."

Howell: From E. E. Clarke; regarded as "very good."

Styre: From A. W. Corson; resembles somewhat the Gansell's Bergamott in appearance. Regarded as "best."

Henrietta: (Edwards,) regarded as "very good."

Wiest: From Kessler; regarded as "good."

Citron; Regarded as "good."

Edwards' Elizabeth: Regarded as "best."

Seedling from the garden of Governor Edwards; presented by E. E. Clarke. Regarded as "best," and recommended by Committee to be named the Quinipiac.

#### GRAPES.

Seedling from Dr. Valk; bunches fine, large, compact, but too unripe to allow of the Committee's decision.

[The communication from Dr. Valk will appear in next number of Review.]

Mr. Cabot, of the Massachusetts Horticultural Society, invited the National Pomological Society to meet in their rooms in 1854, when it was

*Resolved*, That the next session of the American Pomological Society be held in the city of Boston.

General Patterson, speaking for the Pennsylvania Horticultural Society, of which he is President, invited the Delegates, with their families, to attend their Exhibition on Wednesday, Thursday and Friday of this week.

He then moved a vote of thanks to the officers, which was happily responded to by President Wilder, on behalf of himself and the Secretaries.

Mr. James then moved an adjournment till the year 1854, in Boston, which was unanimously carried.

#### The Third Ohio State Fair.

THE universal testimony of all is, that no State Fair in this Union has ever exceeded the one just closed at Cleveland; which is thought to excel in numbers and arrangement of the grounds even that of Columbus, or of Rochester, New York, of last year, and that of Utica, New York, of this year. This speaks well for young Ohio. May she go on in this important race of improvements, that her citizens may reap the advantages which accrue from these annual jubilees of states and counties; for no one can longer doubt their immense importance in the way of exchanging information and acquiring a knowledge of each other and of each other's works. How many valuable improvements in the implements of husbandry have been thus introduced into neighborhoods, which they might never have reached but for these exhibitions. How many new varieties of seeds, improved sorts of fruits and animals have been thus met, seen and admired, but to be obtained, planted and propagated, by hundreds who would otherwise never have known of their existence.

The number of entries is set down at 2802, largely exceeding those of last year. The entries in the department of fruits and vegetables amounted to 500. Among the competitors for fruits, Messrs. Morse and Houghton, F. R. Elliott, Charles Pease and others

appear conspicuous. The grounds, quite near the city or within its limits, were laid off with skill and taste, under the direction of W. Case Esq., aided by F. R. Elliott. Floral Hall, under the superintendence of A. McIntosh, was ornamented with evergreens, and was the center of attraction to all fruit and flower loving visitors, of whom there were legions, estimated at 70,000 persons, from all parts of this, and many from neighboring states. Quite a handsome representation appeared from New York, among them as official visitors General R. Harmon, J. Edgecombe, L. F. Allen and Colonel J. M. Sherwood; the latter did good service also as committeemen. Among the crowds in attendance, there was also a large representation of females, who begin to take a deep interest in the displays of their husbands' and brothers' ingenuity and productions, and indeed, they themselves are extensive exhibitors.

Large numbers of horses and stock of every kind were exhibited, and attracted merited attention from those interested.— Even chickens indicated that the hen-fever prevails extensively. One of the most interesting departments upon such an occasion, whether to a mere philosophic observer, or to the earnest practical farmer, who is anxious to perform his labors in the best possible manner and with the least outlay of force, is that of Agricultural implements; and here was a display worthy of commendation, made up by contributions from several sources, and consisting of every variety of labor-saving machinery for the farm and garden, among which it will be impossible here to discriminate more than the names of a few contributors. Jewett & Co., of Cleveland, presented a large display of the manufactures of Ruggles, Nourse & Co., besides other manufactures; Emory & Co., from Albany, New York; Gill & Co., from Columbus, Ohio; Bright, of Circleville, Ohio; Messrs. Densmore, Seymour & Morgan, of Rockport, New York; Shankland & Co., of Pittsburgh; and Warder & Brokaw, of Springfield, Ohio, who are said to have taken some cups, a premium for best display, as well as the gold medal awarded them in July, at the trial of Reapers and Mowers for Densmore's self-raker.

J. W. Gill, who has long been engaged in the manufacture of native silk, was again

upon the field with his beautiful fabrics, the successful competitor among other aspirants for the credit of introducing this branch of business into our country, instead of importing these luxuries at the expense of exhausting our lands by sending away from the country immense quantities of wheat, beef and pork, which annually abstract the vital elements of our soils, leaving us nothing to make up the deficit.

One of the interesting features of this exhibition was the practical character of the speeches, and among them was one which will be remembered by all who heard it, as it fell from that earnest devotee to Agricultural science, or rather scientific Agriculture, Professor J. J. Mapes, of Newark, New Jersey, some extracts from which may be received in time for this number.

The Fair went off in fine style, making every one feel proud of his State, and all parted with a desire to excel even ourselves at the next annual jubilee whether it assemble in the north, the south or the center, all are as one when the glory and honor of the State is the question.

#### Ohio State Pomological Convention.

THE members of this society met on Tuesday, August 31st, at the rooms of the Columbus Horticultural Society.

The Convention was called to order by A. H. Ernst, Esq., President.

Mr. Ernst stated that the Convention had been called at this early day in order to examine the early varieties of fruits, which could not be done at a later time in the season. On account of the scarcity of fruit no Convention was held last year. Another object was the appointing of delegates to the American Pomological Congress.

On motion of J. A. Warder, the President appointed a committee of three to nominate officers for the ensuing year.

Messrs. F. R. Elliott, Dr. Warder, and M. B. Bateham were appointed said committee.

On motion of Dr. Warder, the Chair appointed Messrs. R. Buchanan, F. R. Elliott, and George G. Comstock a committee to prepare business for the Convention.

Mr. Warder from the committee to nominate officers, reported the names of A. H. Ernst, of Cincinnati, for President, and F. R. Elliott, of Cleveland, for Secretary.

The report was unanimously agreed to.

Mr. Ernst returned his thanks for the honor conferred. He had joined the society for the purpose of improving his knowledge of fruit, not to seek office!

On motion, Dr. J. A. Warder was also appointed Secretary of this Convention.

Mr. Elliott, from the committee on business, made the following report, which was accepted:

"It shall be the first rule of this meeting to discuss such varieties of Fruits in order as are new and not heretofore exhibited at our State Fruit Convention. Afterward to take up such varieties as are known.

"It shall be a rule of this meeting that no person shall speak more than five minutes on any one fruit without permission of the chair.

"A committee of one shall be appointed by the chair to introduce varieties to the Convention for discussion.

"We would recommend to this meeting a permanent organization as a State Pomological Society, and to that end the appointment of a committee to prepare a constitution and present the same this afternoon for consideration."

On motion of M. B. Bateham, the report was adopted.

Mr. Buchanan was appointed to introduce varieties of fruits to the Convention for discussion.

Dr. Warder moved that a committee of two to select fruit for the American Pomological Congress be appointed.

Messrs. M. B. Bateham and M. Kelly were appointed said committee.—*Statesman*.

This body has held a very interesting meeting at which there has been much valuable interchange of opinions among the nursery-men and Pomologists. These meetings are always exceedingly useful and conduce to the correction of the many errors which are apt to occur in the naming of fruits, and the selection of the best varieties is much promoted by the interchanges of opinions and comparisons of specimens on the tables.

The number in attendance was not so large as would have been desired, but those

present manifested a deep interest in the subjects of discussion. The fruits on the table were exceedingly numerous and creditable to the contributors. They were chiefly from Ohio, but a very interesting collection was received from the pioneer of pomology in Kentucky, Lewis Sanders, of Grass Hills, also a number of choice pears from P. Barry, of Rochester, New York.

To the kindness of the reporter of the Statesman, W. F. Wheeler, I am indebted for the following slip from that paper :—

Mr. Elliott stated that from some oversight in the business of the morning session, the committee to prepare a Constitution had not been named, and that as it seemed requisite this body should have some tangible and permanent form, he had prepared a form of Constitution, which he trusted would be found sufficiently comprehensive to meet the wishes of the meeting ; and with permission of the Chair, he would present the same for consideration. Some difficulty had heretofore been experienced in the way of raising funds to pay for the printing of the proceedings, and unless they were printed it became perfectly evident that to the people at large the body might as well never have convened. While now up, he would say that as the culture of fruits was so general throughout the state, and the desire to obtain new varieties becoming daily more and more strong in the minds of the people, he saw no reason why a society, formed for the benefit of the whole state, should not receive the patronage of the state by means of its Legislature, and that he would propose that when this body adjourns, it adjourn to meet again in Columbus, on the second Tuesday in January, and then to send in its petition to the Legislature for "material aid."

The Constitution presented by Mr. Elliott was accepted, and, on motion, taken up section by section, amended, and adopted by a unanimous vote as follows :

1. This Society shall be known as the Ohio State Pomological Society.

2. Its officers shall consist of a President, Vice-President, Secretary, and Treasurer.

3. The President shall preside and conduct all meetings of the society, and in his

absence the Vice-President shall perform the same duties.

4. The Secretary shall record all doings of the Society, and collate and prepare all communications, perform all correspondence, etc., etc., for the public press.

5. The Treasurer shall collect and hold all funds of the society, and pay out the same only on an order of the Secretary, countersigned by the President.

6. The officers shall be elected separately and annually, by a ballot vote, and hold their office until a successor is elected.

7. The object of the society being to collect, condense and collate information relative to all varieties of fruit, and dispense the same among the people, every member shall pay into the treasury two dollars a year, for the purpose of publishing and other expenses ; and any person interested in fruits may become a member, by forwarding to the Treasurer or Secretary the membership fee.

8. Every member shall be entitled to a copy of the transactions of the society from year to year.

9. The President of the society may call a meeting at any time and place he considers desirable, by a notice of thirty days in the public papers.

10. By-Laws and alterations in the Constitution for the purpose of governing further wants of the society, may be enacted by a meeting of a majority of the members present.

A motion was made that a committee of three be appointed to nominate permanent officers of the society.

Committee—Messrs. Noble, Kelly and Bateham.

The committee nominated—

*President*—A. H. Ernst.

*Vice-President*—J. A. Warder.

*Secretary*—F. R. Elliott.

*Treasurer*—M. B. Bateham.

Mr. J. T. Warder moved its acceptance.

On ballot, Mr. Ernst was unanimously elected, and in a few words expressed his sincere thanks.

Messrs. Warder, Elliott and Bateham, were also unanimously elected.

The transactions of this society will be published very soon after its adjournment, and will be found very interesting and important to the fruit growers of Ohio. The



society will now become permanent. Its labors can not fail to be exceedingly beneficial to the growers of fruit in Ohio. For instance: the Fall Pippin is cultivated in various sections of the state under different names. The society corrects this error when the fruit is brought before it, so that the same apple shall bear a uniform name throughout the state. So with other fruits. It will also be the means of introducing the newest and best varieties of fruits from other States.

#### Columbus Horticultural Society.

The seventh annual exhibition was held on the 10th and 11th September, and at the exhibition, as appears from the detailed account furnished by its excellent Secretary, H. C. Noble, Esq., extensive assortments of fruits were presented, and a large variety of vegetables, and beautiful flowers.

The Society feels encouraged to make renewed efforts in this good cause, which they believe is meliorating the condition of man. Liberal premiums were bestowed—among which were several books, and more than one copy of the *Western Horticultural Review*, which is becoming quite a favorite award.

#### New-York State Fair at Utica.

THIS great state has again exerted her efforts, through the State Agricultural Society, to array before the admiring gaze of thousands the varied products of her extensive pastures and dairies, gardens and orchards, fields and workshops, mills and manufactories, and indeed when the enterprising competitors of this state are aroused to a trial of this kind, they do not fail to make a display worthy of themselves and of the Empire State.

As usual, Floral Hall was the point of greatest attraction to those of us who were interested in fruits and vegetables. So that as soon as we could thread our way through the mazes of agricultural implements, cooking stoves and various machinery, casting a glance at the very fine stock of different classes that were numerous and superior, passing by Dairy Hall, with its cheeses, grain and flour barrels—and Manufacturers' Hall, crowded to repletion with every imaginable fabric and invention, those of us who were devotees to Pomona and Flora

assembled at their altars to witness the Horticultural Exhibition here displayed.

The grapes had scarcely ripened sufficiently for exhibition, out of doors, but those from glass houses were superior, particularly the specimens grown by a persevering amateur at Geneva, H. L. Suydam; some of his bunches weighed three pounds. Good specimens were also shown by J. Greig, of Canandaigua, A. Frost & Co., of Rochester, and others. Fine collections of plums were much admired, the most extensive of these was from Messrs. Reagles, of Schenectady.

Apples were present in great abundance and as great perfection as the early period would permit, for many of the winter varieties had not attained their growth. J. Morse of Cayuga Bridge, and J. J. Thomas, of Macedon, appeared to have the finest and most extensive collections; though several others made handsome displays, among whom were Frost & Co., Mr. Vail, Fahnestock & Co., Ellwanger & Barry, Mr. Hastings and E. S. Hayward.

The pears were exceedingly numerous, and among them many new varieties, which having now fruited will be adopted or condemned according to their merits. This fruit was presented in fine condition and there was considerable competition for the premiums. The contributors arranged their plates and accompanying cards, so as to indicate the particular prizes they aimed for—thus saving the committees great labor. Ellwanger & Barry presented one hundred and thirty kinds, C. M. Hovey & Co. had one hundred, Henry Vail, seventy, J. Morse, a large collection of fine specimens, and several others, numerous varieties; thus affording an admirable opportunity for comparison and also for the correction of errors, which was no doubt improved by those interested, for here, as elsewhere, many wrong labels were observed, especially among the smaller collections and those of amateurs.

Peaches, though not abundant, as the crop is not general this year, were still very attractive. The finest and greatest display were from that favored region of Cayuga Lake, by J. Morse. Too much praise can not be awarded to the efforts of several amateurs, whose collections of different fruits presented a beautiful appearance.

Utica does not appear to be filled with devotees of Flora, to support extensive

green-houses hence plants of this class were not so numerous as usual, for it is difficult to transport them to a distance. Mr. F. Boyce, of Utica, contributed a handsome collection; the rest of this class of objects were chiefly from Fahnestock & Co. of Syracuse, and from Ellwanger & Barry and A. Frost & Co., of Rochester. Cut flowers appeared in abundance, also bouquets and fanciful designs and ornaments, among which, as claiming novelty and beauty, the flag of our country, stripes, folds, stars and all, done in *Verbenas* set in moss, and deserves especial praise to the compositors, Frost & Co. The gardens of Rochester also supplied *Roses*, *Verbenas*, *Petunias*, *Asters*, *Japan Lilies*, *Dahlias*, etc., but the finest collection of the latter gorgeous flower were from E. M. Van Alstyne, of Greenbush.

The tent devoted to vegetables presented a rich feast of good things in every imaginable variety—pumpkins, squashes, cucumbers, melons, gourds, *et id omne genus*—corn, celery, eggplants, potatoes of every known and unknown sort in great variety and beauty—cabbages and cauliflowers, Kohl Rabi, and all that race; and, indeed what was not there of root or fruit or foliage that could tempt gastronome? all fine too—especially the eggplants, potatoes and cabbages, doing great credit to the skill and perseverance of the gardeners.

#### Wine Committee at Utica, New York.

SEVERAL gentlemen met at Baggs' Hotel in Utica on Wednesday evening, September 9th, 1852, for the purpose of examining specimens of western wine made from the Catawba grape.

L. F. Allen, of Buffalo, N. Y., having been called to the chair, and C. M. Hovey, of Boston, Mass., being appointed secretary, the samples were introduced.

The first was dry Catawba, made by R. Buchanan, of Cincinnati, in 1850, which was tested by the gentlemen, who were assured that it was the pure juice of the grape without any admixture whatever of saccharine matter nor of spirit, so that its fine color and vinous flavor arose simply from the richness of the must made from thoroughly ripe Catawba grapes.

The opinions of gentlemen being demanded by the chair—Mr. W. R. Prince said he thought it was too acid, and suggested that

this might be corrected by boiling a portion of the must, before fermentation. Dr. Warder objected to any such fabrication, and suggested that the acidity observed in some specimens might be owing to too much racking of the wine and the attendant exposure to the atmosphere.

Mr. Coppock expressed his decided opinion that it was a pure, healthy wine, that left no ill-effects behind it, nor any derangement of the stomach.

Mr. Barry admired the wine much, and thought it a good time to make the suggestion, that the State Agricultural Society, one of whose ex-presidents was acting as chairman, should offer a liberal reward stimulating efforts to introduce the manufacturing of wine, and he suggested experiments with the Clinton grape, which being early, would be most likely to furnish a good wine.

Mr. Prince thought the Clinton grape had been too much neglected; it was early and prolific.

Mr. Hovey concurred fully with Mr. Prince; he had found it very hardy and early, and thought it might be well calculated for a northern wine grape.

Mr. Prince said that all our grapes had been claimed as foreign sorts, and that the French had introduced them into their catalogues with the note indicating their origin (Cape of Good Hope.)

Mr. Allen thought the society would not encourage the growth of the grape for wine. He considered the soil and climate of this state were unfitted for the production of good wine grapes. Had been delighted with the vineyards about Cincinnati, which he had visited when this very wine was on the press. He believed that they could make better wine on the Ohio river hills than any where in New York, and that the Power who placed us here, had adapted plants to peculiar localities. And that it was our duty to embrace the varying advantages of our peculiar situation.

Mr. Rotch, who modestly claimed to be a better judge of cattle than of wine, yet gave a very correct opinion; that the wine was very sound, and contained a sufficient spirit, but that it had been too much handled, hence the asperity observed by some, and by some called sour.

Mr. Kelly, of Cincinnati, observed that the physicians were in the habit of prescribing

it in convalescence; he had himself found it a great restorative to his constitution after it had been severely shaken by an attack of dysentery.

Specimens of Longworth's Sparkling Catawba were then introduced, when Dr. Warder stated that it was preferred to any other champaign in Cincinnati, chiefly on account of its decided Catawba flavor and aroma; the latter might be detected in the empty glasses for some time after they had been drained.

Mr. Burnet had used it for some years; he pronounced it a pleasant wine, a good wine, and an excellent wine; it was so considered by his friend Rotch.

Mr. Prince believed the cause of temperance was only to be promoted by furnishing a pure unadulterated wine—not fabricated. Man required at times some such stimulants that were not intoxicating—and the God of nature had planted the vine in order that man might partake of its products. Italy had been referred to as the *Land of the Vine*—he thought the title misapplied. The grape was a native of Persia, thence introduced into Europe, and many varieties had been produced by seedlings; but, while there was but one species in Asia, none in Europe, and none in Africa, there was at least six species in America—and what might we not expect when the horticulturists of our country had improved their native varieties by impregnation with foreign and other good kinds. The Cincinnati Horticultural Society had offered very large premiums for superior seedlings.

Mr. Allen suggested that for a good table grape that might approach the perfectly ripe Catawba of Cincinnati, it would be desirable to encourage the growth of seedlings.

Mr. Hovey thought that in no way could the culture of the grape be extended with so much prospect of advantage as by offering especial premiums for superior seedlings.

Dr. Warder, being called upon, stated the extent of the culture, modes of cultivation and various other statistical items connected with the vineyards of the West.

A complimentary vote of thanks was offered to Dr. Warder, after which the meeting adjourned.

C. M. HOVEY, Sec'y.

#### Albany and Rensselaer Horticultural Society.

To the President of this Society, Dr. H. Wendell, I am indebted for extended accounts of the meetings during the summer, from which these brief notices are condensed.

The Autumnal Exhibitions of the Albany and Rensselaer Horticultural Society took place on Tuesday and Wednesday, the 13th and 14th ult. The display of fruits, flowers and vegetables exceeded that of any former exhibition. The Society met at 12 M. on Tuesday, its President, Dr. Herman Wendell, in the chair, who, in an appropriate and feeling manner, called the attention of its members to the death of the late A. J. Downing, editor of the *Horticulturist*, and offered appropriate resolutions, which were unanimously adopted.

From the reports of the committees, it appears that the show was very imposing and extended; it had one effect, however, which must be considered prejudicial to the advance of Pomology—for it occurred at such a time as to detain its accomplished President and his active accessories from the great meeting at Philadelphia; for the same reason, many of us were prevented from attending the show at Albany.

Liberal premium lists were awarded in all the departments.

#### Buffalo Horticultural Society.

It is quite a matter of regret that so many interesting horticultural convocations must be put off with a mere mention of their doings in this number, especially as the neglect flows in part from the editor's absence from his tripod while attending similar meetings.

And among the rest, our Buffalonian friends must submit to be cut off with a five line notice, notwithstanding the accounts of their spirited weekly meetings which have been promptly furnished by the devoted Secretary, J. B. Eaton,—who is urged to continue his favors. From these it appears that the exhibition of fruits, flowers, and vegetables have been very creditable, and must be encouraging to the friends of horticulture, who are increasing in this glorious City of the Lake.

### The Pennsylvania Horticultural Society.

THIS ancient and honorable association held its annual festival upon the 15th ult. at the Chinese Museum, when it was my good fortune to witness once more, the grand display of Philadelphia's best gardens, from which pleasure I had been long deprived by absence.

The large halls were filled with plants, fruits and vegetables in great profusion and of fine quality. The latter especially, were of a character that we do not attain. Of fruits, the pears were particularly numerous and fair. The apples good, but the peaches, though very fine, were not so numerous as was anticipated by those of us who had come from the West. The plants were many of them rare, and some noble old specimens appeared among them, but there were comparatively few exhibited in bloom, and they did not appear to have been "grown" for exhibition with the same care and success that has been observed among our own cultivators, for a few years past.—The new achimenes were beautiful; the Victoria, most attractive, floating in its tank.—The display of cut flowers, roses, verbenas, dahlias, did not equal our expectations. The decorations and ornamental work were elaborate.

But why cavil, where so much of real merit exists, embracing many objects worthy of our imitation, and many results that will long be beyond our reach?

### Michigan State Fair.

A RECENT visit to the Peninsular State has been the source of great enjoyment, in furnishing an opportunity to become acquainted with the intelligent citizens and their varied productions, as well as to study the monuments of a race who early settled on the Detroit river, among which the most interesting are the *Old Pear Trees*: but of these no further mention can be made at present than that they are of themselves worth a visit to Detroit.

The third State Fair was held on the 22d and subsequent days of September, when a large assemblage of farmers, with wives and daughters, assembled to witness the handsome display of farm stock and products, implements, etc., etc., that were collected. Those who are best qualified to judge declared the collection very good.—

Flora contained the greatest attractions to me and enchained my attention chiefly. The fruits were especially interesting; they were fair and consisted of many varieties that differ materially from the kinds we cultivate in Ohio. Many seedlings are peculiar to this region, and they often bear a remarkable similarity to the Calvilles, Fameuse, and Pomme Grise. Large orchards of natural fruits still exist, and they possess a strong family likeness. A great part of two days was thus spent among these fruits, which, however, are not all seedlings, but embrace most of the approved varieties that are cultivated elsewhere, and, so far as appeared from the specimens on the tables, the Michigan Orchards bid fair to excel all others in the beauty of their fruits. Let them only expurgate their collections of all those poor, large coarse apples that are "good to sell"—for they will soon be discovered to be "good" only in a *bad* market.

It had been my intention to have written an extended notice of this flourishing State Society which has often attracted my attention, but, the printer says he can find no more space and abruptly stops the pen.

### World's Fair in New York.

THE following is the circular of the Directors, which they are anxious should have the widest publicity:—

Office of the Association for the Exhibition of the  
Industry of all Nations, N. Y. July 12, 1852. }

The Association for the Exhibition of the Industry of all Nations give notice that the exhibition will be opened, in the city of New York, on the 2d day of May, 1853.

The municipal authorities have granted to them the use of Reservoir-square, and they are proceeding to erect thereon a building worthy of the purpose to which it is to be devoted.

The association desire to make the exhibition, in facts as well as in name, a representation from other countries as well as their own, of raw materials and produce, manufactures, machinery and fine arts.

To this end they have made arrangements with Charles Buschek, Esq., late Commissioner of the Austrian Empire at the Industrial Exhibition in London, whose skill, experience and high character offer the most satisfactory security to contributors from abroad.

Mr. Buschek is the authorized agent of the association, for all countries other than the continent of America, and as such has received its instructions.

All communications from contributors abroad must be addressed to him at "The Office of the Exhibition of the Industry of all Nations in New York," No. 6, Charing Cross, London. He will state to them the nature of the powers given and authority conferred, and will also explain the great inducements offered by this enterprise to European exhibitors.

This association will correspond with all persons in the United States, the Canadas and British Provinces, the West Indies and this continent generally, who may desire to contribute to this exhibition.

All such communications must be addressed to "The Secretary of the Association for the Exhibition of the Industry of all Nations, New York."

The association is now ready to receive applications, and it is desired that they be sent in immediately. Due notice will be given, hereafter, when the building will be ready for the reception of articles.

Applications for the admission of objects to the exhibition must represent intelligibly their nature and purpose, and must also state distinctly the number of square feet, whether of wall, floor or counter, required.

Machinery will be exhibited in motion—the motive power to be furnished by the association—and applications for the admission of machinery, to be so exhibited, in addition to the general description and the requisition for space, must set forth the amount of motive power required.

The association deem it proper to announce that paintings in frames will be exhibited.

As, notwithstanding the magnitude of the proposed building, there must necessarily be a limitation of space, the association reserves the right to modify or reject applications, but, in so doing, will be governed by strict impartiality, looking only to the general objects of the enterprise.

The association also reserves the right of determining the length of time, not to exceed in any case one season, during which objects shall, severally, form part of the exhibition.

Exhibitors are requested to designate an

agent to whom their contributions shall be delivered when withdrawn from the exhibition.

Prizes for excellence in the various departments of the exhibition will be awarded under the direction of capable and eminent persons.

With this statement the Directors solicit the co-operation of the productive intellect and industry of their own and other countries.

THEODORE SEDGWICK, *President.*

WM. WHETTEN, *Secretary.*

#### Reverence for Trees.

PROF. PARK, in his sermon on the life and character of the late Prof. B. B. Edwards, of Andover Theological Seminary, relates a beautiful incident, illustrative of the gentle spirit of that eminent divine. "He bought a half acre of land adjoining his house," says Prof. P., "principally for the sake of an old oak which grew upon it. He had long desired to own such a tree, for the oaken wreath is rich with classic associations, and angels of the Lord sat under the oak of old, and many a sermon did he hope to write under its shade." We hope the time is coming when something of the reverence that is entertained for sacred places, and for works of art, will be cherished toward the trees. Much has been done in many of our towns and villages, within a few years, to remedy the sad error of our fathers, who seem to have supposed that forest trees, like savages, were to be thoroughly extirpated from the soil; but there are yet some barbarians among us, who see nothing in a tree but so many cords of wood. We could point to a certain town in this vicinity, a town, too, whose greatest blemish is a "plentiful lack" of ornamental and shade trees, where several large and handsome elms, walnuts, oaks etc., standing in public highways, have been chopped for firewood, within a short time. It is time this vandal spirit were frowned down, by a purer taste. The Jews of old were forbidden to cut down the fruit trees even of an enemy (see Deut. xx, 19, 20,) "for the tree of the field is man's life." There are reasons abundant why the same prohibitory care should be extended among us to ornamental trees, and be sacredly observed by the community generally.—*New England Farmer.*

## Editorial.

### THE FRONTISPIECE.

THE illustration for the month is taken from a very numerous and beautiful collection in the port-folio of an architect of our city, where are many well deserving the attention of the admirers of taste and progress in domestic architecture; a class which is increasing, as we are pleased to be persuaded, by the proofs given on every hand, but which it would be most desirable should have the aid of experience and well instructed skill, particularly from the considerations, not only of the amount of money expended, but also the influence necessarily produced by the embodiment of good or bad taste, constantly before the eye, and affecting the occupier in his every-day retreat from the absorbing and harassing occupations of trade.

Much might be said upon the subject, which would be interesting; but I may return to it again, as other instances are exhibited of the adaptation of certain styles and compositions to their sites, etc., and discuss the necessity of the study of these matters.

This design has been executed on the side of a picturesque hill commanding an extensive and beautiful valley in the south of Ireland, and it would be suitable for many of the ornamental and beautiful sites around our city. The reader is referred to W. Tinsley & Son, architects.

**DELAY AND ITS CAUSE.—FALL MEETINGS.** The issue of this number has been somewhat delayed on account of the editor's absence during the month September—the month of fairs—many of which he has attended, and

though the accounts thereof that appear in the preceding pages are brief, many interesting observations have been made and valuable facts noted for future reference, to the advantage of the reader, it is believed. Therefore, no apology is offered, as he was absent on behalf of his readers.

The floral exhibitions of Massachusetts at Boston, Rhode Island at Providence, and of the new society at New York, were not reached, but some account of them shall be put upon record when received. Of the last it is said that the Gothamites did not patronize the great efforts made to please them, sufficiently to cover the expenses incurred. This should not be.

THE NEXT NUMBER will be issued, it is hoped, on the first of November. The editor has already endeavored to impress upon his patrons the absolute necessity of advance payments, and now he simply reminds his readers that they need not feel hurt if No. 2 does not make its appearance to each of them. To *subscribers* it will be sent as correctly as possible, and any such are requested to give immediate notice of a failure. New subscribers may now forward their applications very opportunely with the commencement of the volume. For terms see cover.

**TO BE DONE.**—The season of fairs is at its height, but it is impossible to visit all, attractive as they are. The editor hopes to be present at London, Madison county, Ohio, on the 8th proximo, possibly at Columbus, probably at Eaton, Preble county, Ohio, on the 15th, and certainly at the maiden effort

of our sister state at Indianapolis on the 19th, where he hopes to meet many warm friends and to find new hands as ready to bid him welcome as those who have heretofore met him so kindly in the Hoosier State. Would that he could also attend the county fairs of Franklin, Shelby, Rush, and many others, of which the bills have come to hand, especially those which award this work as a premium.

Why does not the Indiana Farmer publish a list of the county fairs in that state?

**NURSERY CHANGES.**—I am informed that Charles Downing has sold his extensive collection of nursery stock to F. R. Elliott, of Cleveland, who will therefore be again ranked among the fraternity. The removal is to take place so soon as the season will admit.

S. S. Jackson, who has long occupied the River Road Nursery, near this city, which establishment indeed he created, has moved his residence and garden to his own property on the plank road to Cleves, a few miles west of the city, where he finds a congenial soil, especially adapted to his purposes.

I. C. Ferris will also travel throughout the South and West to take orders for trees and plants, of which he can speak advisedly; and at the same time solicit subscriptions for the Western Horticultural Review, the Ohio Cultivator, and perhaps the Journal of Agriculture, for which works he will be constituted an accredited agent.

**NOTICES.**—Not of books, but of their arrivals, which is all the printer will allow space for. *Saxton's Rural Hand-Books*, first and second editions, not separate as noticed before, but the suite of each series conjoined, making two handsome volumes. From Ward & Taylor, East Fourth street.

*The Journal of the National Agricultural*

*Society*, Dr. Daniel Lee, Washington, D. C. A quarterly of respectable size and appearance, containing many valuable articles, to which future reference shall be made as the way may open.

**CATALOGUES.**—New editions and old, make their appearance from every quarter at this season of the year. Among them are those of Ellwanger & Barry, A. Frost & Co., of Rochester, New York; Thorp & Co., Syracuse, New York; Reagles & Son, Schenectady, New York; T. Maxwell, Geneva, New York; Hubbard & Davis, Detroit, Michigan; James Dougall, Windsor, Canada West, and many others not now at hand.

**THE HORTICULTURIST.**—It is rumored that this excellent standard periodical has been sold by Mr. Tucker to Mr. Vick, of the Genesee Farmer, and is to be removed to Rochester with the opening year. In thus coming a little nearer to our periodical, let us indulge the hope that its conductor, whoever he may be, will be characterized at least by the gentlemanly bearing that was ever apparent in the course of the lamented A. J. Downing, Esq., while he held the pen on the Hudson.

**POMOLOGICAL CONVENTION AT DIXON, ILL.**—The period assigned for this great gathering of the fruit growers of the North-west was unfortunately the same as that set for our own Horticultural Exhibition; it was therefore impossible to attend the former. The results of this meeting will be anxiously watched and shall be laid before the reader in a condensed form so soon as received, probably in the next number. The fruits that have heretofore reached us from that new region were characteristic and possessed of great interest. F. R. Elliott, of Cleveland, who is studying special Pomology, with a view to publication, attended this meeting

and will probably furnish an editorial account of its doings in the Ohio Farmer. These conventions have been productive of great good, not only in a social point of view, but especially in correcting the confusion of names by comparing synonymes.

**WESTERN POULTRY ASSOCIATION.**—This energetic crowing concern has been making quite a stir in Hendon. They have issued a neat pamphlet setting forth their object, aim and history; they have also issued a

handsome bill of Premiums they intend to offer to the whole West who choose to come here on the ninth of November to compare chickens and birds of every ilk. This may appear a small affair to some, but it has become a great business. The crowsers from the north part of the state are expected, as well as the *Chapman* stock from Indiana and the corncrackers of Kentucky, for a splendid room has been engaged and complete provision will be made to feed and protect all feathered visitors.

### METEOROLOGICAL TABLE.

CINCINNATI, AUGUST, 1852.

THERMOM.			WEATHER.			RAIN.	Date.	WINDS, ETC.	
Date.	Min.	Max.	Sunrise.	Noon.	Sunset.				
1	60	81	clear ....	clear ....	clear ....	....	1	Light N. W.	
2	58	80	do. ....	do. ....	do. ....	....	2	Light NW., calm.	
3	63	85	variable .	do. ....	cloudy ..	....	3	Light E., brisk SE.	
4	69	84	do. ....	do. ....	do. ....	....	4	Light W.	
5	66	83	clear ....	do. ....	variable .	....	5	Light W.; brisk W. and NW.	
6	61	80	do. ....	do. ....	clear ....	....	6	Light N. and NE.	
7	62	84	do. ....	do. ....	do. ....	....	7	Light SE.	
8	66	85	variable .	variable .	do. ....	....	8	Calm; light SE; calm.	
9	69	84	cloudy r'n	clear ....	cloudy ..	10	9	Light SE.	
10	71	84	rain ....	variable .	variable .	05	10	Light NE. and N.; brisk N., calm.	
11	62	81	clear ....	clear ....	clear ....	....	11	Light N.	
12	61	84	do. ....	do. ....	do. ....	....	12	Calm; light SE.	
13	62	85	do. ....	do. ....	do. ....	....	13	Light S.	
14	65	89	do. ....	do. ....	cloudy ..	....	14	Brisk SW; calm	
15	72	78	cloudy ..	variable .	do. ....	....	15	Light W.; calm.	
16	69	74	rain ....	rain ....	do. ....	80	16	Calm; light SE.; calm.	
17	69	81	cloudy ..	clear ....	clear ....	....	17	Calm.	
18	68	89	fog, clear	do. ....	do. ....	....	18	Calm; light S.; calm.	
19	69	89	clear ....	variable .	cloudy ..	....	19	Calm; light SW.; calm.	
20	75	81	rain ....	do. ....	cl'dy, rain	1-10	20	Calm; light SE.; calm.	
21	73	87	variable .	clear ....	rain ....	1-95	21	Calm; light SE; calm; thunder.	
22	72	83	clear ....	rain ....	clear ....	25	22	Light S. and SE.	
23	72	88	variable .	clear ....	do. ....	....	23	Light SE.	
24	74	87	clear ....	variable .	do. ....	05	24	Light S.; calm; rain at night.	
25	77	87	variable .	do. ....	rain, var.	05	25	Light S. and SW.; thunder.	
26	72	88	cloudy ..	clear ....	clear ....	....	26	Calm; light SW. and W.; calm.	
27	69	75	clear ....	do. ....	variable .	....	27	Light W., N., NE.	
28	63	78	variable .	do. ....	clear ....	....	28	Light N.	
29	62	80	clear ....	do. ....	do. ....	....	29	Light N.; calm.	
30	62	83	do. ....	do. ....	do. ....	....	30	Light W. and E.; calm.	
31	62	83	do. ....	do. ....	do. ....	....	31	Calm; light S. and W. [Wild plum ripens.	
Inches, 4.35							Mean temperature of the month.....75.09		
Clear days in the month.....11							do. do. August, 1851.....76.47		
Variable—sun visible.....19							do. do. do. 1850.....78.26		
Cloudy—sun not visible.....1							do. do. do. 1849.....75.69		
							do. do. do. 1848.....74.60		
							do. do. do. 1847.....70.54		
							do. do. do. 1846.....76.65		
							do. do. do. 1845.....76.73		
							Mean temperature of the above 8 months.....75.50		
							Do. do. of Min. ....66.93		
							Do. do. of Max. ....83.24		

#### REMARKS.

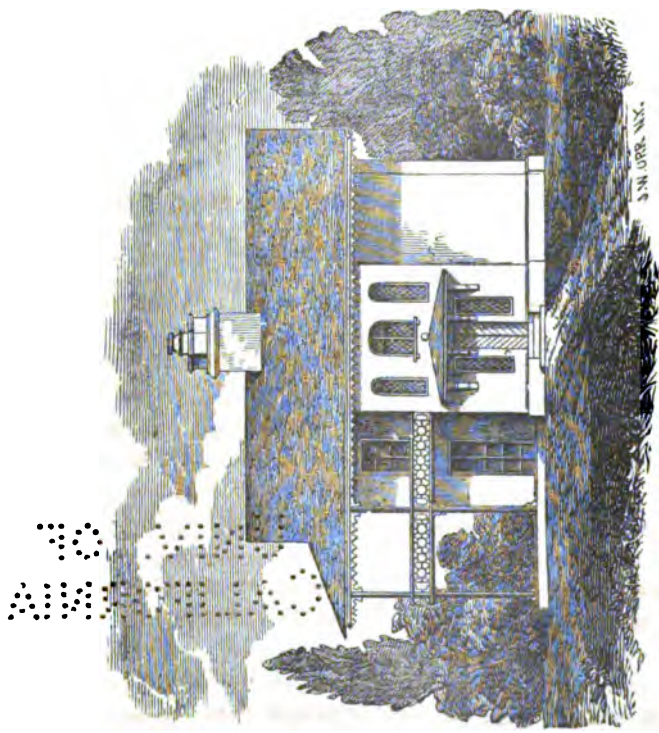
The mean temperature of this month is somewhat under the usual mean for the last eight years, and the latter half of it, (after the rain,) unusually pleasant; a fair average of rain; but little thunder and lightning,

and no high wind. A severe squall passed over the eastern skirt of the city on the 25th inst.,—as stated in the newspapers,—and caused considerable damage to some houses in Fulton.

JOHN LEA.



[illegible]



A SMALL SOUTHERN HOUSE.



Vol. III.

NOVEMBER, 1852.

No. 2.

## Miscellaneous.

### SOME REMARKS ON SHADE TREES.

DR. WARDER:—A very pleasant article in the August number of the Horticulturist, by the lamented Downing, entitled "Shade Trees in Cities," embraced a warm recommendation of the Tulip-tree, more commonly called Whitewood, as an avenue or street tree. He said truly, that it is an American tree that one rarely sees planted in America; and he may have been right in saying that there are none superior to it. I have often wondered that so little has been said of its nobility, and of its most Grecian artistic beauty. But I have often wondered that the *Oak* should have been so little appreciated. How rarely do we see this tree planted in ornamental grounds, and still more rarely as a street shade!

While cheerfully granting to the tulip all the good qualities that Mr. Downing ascribed to it, I shall be glad to modify the effect of his suggestions a little. Availability is a "prime article" with us Americans: and it is for this virtue that we would now give the oak the preference over the tulip, and over nearly all other trees, for the avenue. Fine individuals of the white and bur oak—

the former especially—are so familiar to the tree observer in all parts of the country, that it is needless here to enumerate their beauties. The tulip-tree is fair and most queenly; and so is the white oak. "Clear and lustrous in its tufts of foliage;" but not more so than the oak: and though throwing up its compact column in stately massiveness, is not a whit more regal than the oak in its combination of strength, grandeur, and unity of proportion. As I now look upon a mass of forest trees within the range of my eye, there is no tree in all the large variety there presented that stands out so clearly and boldly in the mass of green, as the white oak. The season has been a dry one here, and nearly all the other trees in the forest are suffering from drought, and present a faded and sallow look. The oak throws its roots down deeper than most trees, and thus finds a regular and constant supply of moisture for midsummer use. The most graceful guardian of the town's ways, the elm, has always been rather my favorite as a street tree; but there may be truth in Mr. Downing's objection. It may be too

spreading. Not so the oak. It rarely extends itself laterally so as to darken a reasonably wide street. We make no provision for planting lanes or alleys.

My experience in planting the oak has been quite satisfactory. In a row of trees set out last year, comprised of two varieties of maple, the elm, the chestnut oak and the white oak, none have grown more thriftily than the last, and none have felt the drought less. The trees were all large enough when set to withstand the ordinary assaults of street trespassers. It is not *essential* with the oak, as with the tulip, that the soil be very rich, nor that any greater care be taken in its removal than with the elm or the maple; though we assume that there is little danger of getting the soil too rich for any shade tree.

The family of oaks is a large one, nearly all excellent for shades. The white and the overcup are the most deserving, and perhaps there is but little choice between the two. Neither grows quite so rapidly as the white elm; both faster than either of the three most popular varieties of the maple. The chestnut oak is a very handsome tree; the foliage a beautiful dark rich green. It grows well here.

There is no good reason why the oak should not be as generally planted for a street tree as any other. I have seen as yet no objection to it at all important. Insects trouble it little; it grows in any soil; and seems never impatient of removal. That it is so easily obtained in nearly every township in the country is a strong plea for it.

There are people enough all over the country, and especially at the West, who plant out whole rows of the locust and ailanthus, with the finest of oaks under their very noses, who would not think of going so far as in most cases would be necessary to find the whitewood. At the West, too,

fine thrifty young oaks may be found growing alone, where they have had a chance for open ground acclimation, perhaps more generally than any other tree; while the whitewood is more confined to the close forest.

To the far greater number of tree planters, with whom "a tree is a tree," no matter what, (accessibility being often the test of merit,) we must recommend something available. We, at the West, can not, for the present at least, send to the Eastern nurseries for our street trees.\* We want something that combines as many of the good qualities of a shade tree as possible, without much cost or trouble; and this the oak does.

The more impatient of us, who are not satisfied with anything which does not grow as rapidly as the locust or abele, may alternate either of these trees with the oak if they choose. Indeed, with any of our forest trees the locust is a most fit associate; and while it should not be recommended for exclusive use, will add value to an avenue, because it comes on earlier than any hardy tree worth having. It is quite a comfort to know, that with the ultimate prospect of a permanent, beautiful and ever improving shade, we may by adding the locust have a quick result. There is a time in the summer when the locust is a right worthy tree, say what we may of it. True, it is a long time in putting on its season's suit, which it is so early inclined to throw off; but when once clothed, it presents a mass of green that is truly beautiful. The poor tree has been sadly handled by enemies of suckers, and cracking limbs, and ugly, deforming seed-pods. I am old-fashioned enough to ask that it be blotted from the list of trees when white houses shall no longer find appropri-

\* And are unwilling to pay our own nurserymen a fair remuneration to induce them to keep a supply.—Ea

ate situations to enliven. It should be said here that the locust thrives best on sandy soils, and often looks stiff and meager on stiff clay.

I have also a good word to say for several other of our forest trees. If one wants a variety of native shades, he will not be disappointed in the white ash nor in the linden. What a pity I can not add the hickory and the beech for general cultivation! trees opposite in character—types of the symmetrical and the picturesque. But one of them *won't* be moved on any consideration, and the other is very reluctant.

The generally uncouth and naked condition of our country towns arises mainly from the neglect of the most simple and accessible remedies. You may take a village with the rudest architecture in the country, and shade the streets well, when it will be pretty in spite of all else, if it does not want too much in cleanliness. I may safely say that there is not a village in the country that might not be made beautiful, if a sum no larger than five hundred dollars were to be withdrawn from some useless and unadorned architectural expenditure, and devoted to a judicious planting of trees on the streets built on. Why, trees are the most economical of all adornments in towns not densely crowded. What, think you, has been the cost of those fine avenues of elms that so gracefully throw out their luxuriant arms for the protection and admiration of the citizens of New Haven and the world of outsiders? And how much on the trees which have given Northampton, Springfield and Stockbridge their principal reputation for beauty? A no greater, probably, than is yearly expended by admiring mothers for the extra "fixings" on baby clothes in some of our small villages.

Horticultural societies generally have not given proper encouragement to ornamental tree planting in streets and roads. There

should be a premium offered, in every town and county society, for the best row of a given number of trees in the villages and in the country; and one also for the best rows and groups of trees thinned-out from the "second growth" along the road-side and in the fields. Such premiums are offered in our county (Lenawee) with good effect.

WM. H. SCOTT.

ADRIAN, Mich., Sept. 7, 1852.

#### Vegetation of the Frozen Regions.

THE following extract is from Seaman's "Botany of the voyage of H. M. ship *Herald*, under the command of Capt. Kellett," in search for Sir John Franklin. The accounts of the remarkable phenomena exhibited in those icy regions, will be found new and exceedingly interesting:

"The soil is always frozen, and merely thaws during the summer a few feet below the surface. But the thawing is by no means uniform. In peat it extends not more than two feet, while in other formations, especially in sand or gravel, the ground is free from frost to the depth of nearly a fathom, showing that sand is a better conductor of heat than peat or clay, and corroborating the observation of the accurate J. D. Hooker, who, after a series of experiments in India, arrived at the same conclusion. The roots of the plants, even those of the shrubs and trees, do not penetrate into the frozen subsoil. On reaching it, they recoil as if they touched upon a rock, through which no passage could be forced.

"It may be surprising to behold a vegetation flourishing under such circumstances, existing independent, it would seem, of terrestrial heat. But surprise is changed into amazement, on visiting Kotzebue Sound, where, on the tops of icebergs, herbs and shrubs are thriving with a luxuriance only equaled in more favored climes. There, from Elephant to Escholtz Point, is a series of cliffs from seventy to ninety feet high, which present some striking illustrations of the manner in which Arctic plants grow. Three distinct layers compose these cliffs. The lower, as far as it can be seen above the ground, is ice, and from twenty to fifty feet high. The central is clay, varying in

thickness from two to twenty feet, and being intermingled with remains of fossil elephants, horses, deer and musk oxen. The clay is covered by peat, the third layer, bearing the vegetation, to which it owes its existence. Every year, during July, August and September, masses of ice melt, by which the uppermost layers are deprived of support, and tumble down. A complete chaos is thus created. Ice, plants, bones, peat and clay are mixed in the most disorderly manner. It is hardly possible to imagine a more grotesque aspect. Here are seen pieces still covered with lichens and mosses, there a shoal of earth with bunches of willows; at one place a lump of clay with senecios and polygonums, at another the remnants of the mammoth, tufts of hair, and other substances which are evidently decomposed animal matter. The foot frequently stumbles over osteological remains, some elephant's tusks measuring as much as twelve feet in length, and weighing more than two hundred and forty pounds. Nor is the formation confined to Eshholtz Bay. It is observed in various parts of Kotzebue Sound, on the river Buckland, and in other localities, making it probable that a great portion of North America is under a solid mass of ice. With such facts before us, we acknowledge that terrestrial heat exercises but a limited and indirect influence upon vegetable life, and that to the solar rays we are mainly indebted for the existence of those forms which clothe with verdure the surface of our planet.

"A curious fact is stated respecting the condition of the vegetable world during the long days of the Arctic summer. Although the sun never sets while it lasts, plants make no mistake about the time when, if it be not night, it ought to be; but regularly, as the evening hours approach, and when a midnight sun is several degrees above the horizon, droop their leaves, and sleep even as they do at sunset in more favored climes. 'If man,' observes Mr. Seaman, 'should ever reach the Pole, and be undecided which way to turn, when his compass has become sluggish, his time-piece out of order, the plants which he may happen to meet will show him the way. Their sleeping leaves will tell him that midnight is at hand, and at that time the sun is standing in the north.'"

#### A Window Garden.

DOCTOR WARDER:—The inclosed letter was originally published in the August number of "Mrs. Whittelsey's Magazine for Mothers and Daughters." Having seen it in different papers in a mutilated form—in portions, under different heads—I have cut them out, supplying the missing parts from the Magazine itself. I think you will agree with the editor, that "it contains a lesson for husbands and wives most gracefully conveyed." It was not written for publication, but to a mutual friend. I hope you will think Mrs. W. has done well to "rescue it from oblivion," as it commends itself to the young wives of Cincinnati as well as New York. By giving it an insertion in the Review, you may gratify others as well as

R. B. N.

CEDAR BANK, Sept. 15, 1852.

I would like to tell you how my husband and I amuse ourselves and contrive to have all we want. You will see we illustrate the old saying, "where there is a will there is a way." We both love flowers extremely, but we neither own nor control a foot of ground; still, we have this summer cultivated and enjoyed the perpetual bloom of more than a hundred varieties. You will wonder how this is done when we are at board, and our entire apartments consist of a parlor and dormitory—both upon the second floor. Very fortunately our windows open upon a roof which shelters a lower piazza, and this roof we make our balcony. Last May we placed here eight very large pots of rich earth, which we filled with such seeds and plants as suited our fancy. Now, while I sit writing, my windows are shaded with the scarlet runner, morning-glory, Madeira and cypress vines, so that I need no other curtains. Then, on a level with my eye, is one mass of pink and green—brilliant verbenas, petunias, roses and oleanders seem really to glow in the morning light. Flowers in the city are more than beautiful, for the language they speak is so different from everything about them. Their lives are so lovely, returning to the culturist such wealth of beauty; and

then their *odors* seem to me instead of voices. Often, when I am reading, and forget for a time my sweet companions, the fragrance of a heliotrope or jessamine greets me, causing a sense of delight, as if a beautiful voice had whispered to me, or some sweet spirit kissed me. With this presence of beauty and purity around me, I cannot feel loneliness or discontent.

Our flowers are so near to us, we have become really intimate with them. We know all their habits, and every insect that harms them. I love to see the tender tendrils of a vine stretch for the string that is fastened at a little distance for its support, and then wind about it so gladly. Every morning it is a new excitement to see long festoons of our green curtains, variegated with trumpet-shaped morning-glories, looking toward the sun, and mingled with them the scarlet star of the cypress vine. When my husband comes home wearied and disgusted with Wall street, it refreshes his body and soul to look into our "hanging garden," and note new beauties the day has developed.

I trust the time and attention we thus spend are not wasted, for I believe the sentiment of Coleridge's lines:

"He prayeth best, who loveth best  
All things, both great and small;  
For the great God who loveth us,  
He made and loveth all."

But there is one circumstance that makes this garden precious which I have yet to tell you, and you will agree with me that it is the best part of it. When we were married, my husband was in the habit of drinking a glass of beer daily. I did not approve of it, and used to fancy he was apathetic and less agreeable afterward; but as he was so fond of it, I made up my mind not to disagree upon the subject.—Last spring, when we wished some flowers, we hesitated on account of the expense, for we endeavored to be economical, as all young married people should. Then my husband very nobly said that though one glass of beer cost but little, a week's beer amounted to considerable, and he would discontinue the habit, and appropriate the old beer expenditure upon flowers. He has faithfully kept his proposal, and often as we sit by our window, he points to the blooming balcony, saying, "There is my

summer's beer." The consequence of this sacrifice is that I am a grateful and contented wife; and I do assure you (I being judge,) that since beer is turned into flowers, my husband is the most agreeable of mankind.

#### Agricultural Institutes,

WORLD'S FAIRS, in a home way, are promised in several new quarters, and right glad should we be to find the people awakening to the immense importance of these gatherings. Oh, that some of the choice spirits from those states in which the ferment has not begun to act, could enjoy the privilege of viewing the great collections that are now to be seen almost every week during September and October. The South is arousing, and the North too—the Upper Mississippi Valley, away up where the water runs cold all summer.

SOUTH CAROLINA INSTITUTE.—The following circular, from the Secretary of the S. C. Institute, was noticed in our last (July) number, page 111. We now take pleasure in laying it before our readers, and to invite them generally not only to become members of the Institute, but to prepare to exhibit their "Agricultural articles, products, stock, etc." Let us not become the "Rip Van Winkle" of the South, but let us be up and doing—let us prove to our sister states that "some things *can* be done as well as others." We have just returned from our great Railroad Convention at Anderson Court-House, and from what we there saw and heard, believe our state is fully alive to the great importance of internal improvements. Let us encourage and cherish that spirit which is lighting up our borders. Let us not only encourage the making of railroads to carry our products to market, but let us encourage the organization of societies, the objects of which shall be to improve agriculture and increase the agricultural resources of the state, so that our railroads when built, may have yearly increased transports, not only of our produce to market, but of stock, and articles of mechanical skill and ingenuity for exhibition at our great Southern

Fair, which we may hope to see yearly held at this (to be) great emporium of our state and of the South.

At a meeting of the Directors of the South Carolina Institute, held in November, 1851, it was

*Resolved*, That the Secretary be instructed to open a correspondence with the President of the State Agricultural Society, and with the several district societies, upon the subject of obtaining co-operation of these societies in carrying out the objects of the Institute. And also as to the feasibility of having a general Fair in November, 1852, whereat agricultural articles and products, stock, etc., may be exhibited.—The Fair to be held at Charleston cotemporaneously with the annual Fair of the Institute, and as an ally thereto."

WILMOT G. DESAUSSEURE,  
—Farmer and Planter. Secretary.

LEE COUNTY, IOWA, AGRICULTURAL SOCIETY.—This Society, with a commendable liberality, has opened its doors to all the Mississippi Valley, and we hope our Missouri farmers will avail themselves of the offer, and exhibit some of the productions of our state.

Probably there is no section of country in the world where may be concentrated such a variety of productions, or where more remarkable proofs of the fertility of the soil can be obtained. Such a society might inclose in its operations the whole region from the Falls of St. Anthony to the mouth of the Arkansas, and such is the facility of intercourse, that this whole extent might be represented in its exhibitions. It would inclose one-fourth of the agricultural land of the Union, and ultimately will inclose one-fourth of the agricultural population.

Our Iowa neighbors have our sincere thanks for taking the initial steps in this movement, and we hope the farmers of Illinois and Missouri will cordially unite with them. Let there be a good turnout to the exhibition this fall, and let every man go with a determination to give his name and influence to so praiseworthy an object.

At a general meeting of the members of the Society, the following, among other resolutions, were unanimously adopted:

*Resolved*, That an exhibition be held in the city of Keokuk, in the early part of Oc-

tober next, and liberal premiums be awarded for the best specimens exhibited, including the various departments of agriculture, manufactures, mechanics, horticulture, and household arts, adapted to the growth and production of the Upper Mississippi Valley.

*Resolved*, That the officers and members of all the county societies organized in the Mississippi Valley, as well as the leading agriculturists, be invited to cordially co-operate in this movement, so that if possible an Industrial Association for the entire Upper Mississippi Valley be organized at the close of the exhibition, so as to enable that body to hold a grand Industrial Fair at St. Louis in the autumn of 1852.—*Val. Farmer*.

#### Constitution and By-Laws of the American Pomological Society.

##### CONSTITUTION.

ARTICLE 1. The name of this Association shall be "The American Pomological Congress."

2. Its object shall be the advancement of the Science of Pomology.

3. It shall consist of Delegates appointed by Horticultural, Agricultural, and kindred Societies in the United States and British America, and of such other persons as take an interest in the welfare of the Association, and are desirous of promoting its aims.

4. The meetings shall be held biennially, at such time and place as may be designated by the Society; and special meetings may be convened at any time on the call of the President.

5. The officers shall consist of a President, one Vice-President from every State, Territory and Province represented, a Treasurer and three Secretaries; and shall be elected by ballot or otherwise at every biennial meeting.

##### BY-LAWS.

1. The President shall have a general superintendence of the affairs of the Society during its vacation; give due public notice of the time and place of meeting; preside at its deliberations; deliver an address on some subject relating to Pomology, at every biennial meeting; and appoint all committees, unless otherwise directed.

2. In case of the death, sickness or inability of the President, his official duties shall devolve on one of the Vice-Presidents,



according to the order in which they stand on the minutes.

3. The Treasurer shall receive all moneys belonging to the Society, and pay over the same on the written orders of the President.

4. The Secretary shall, with the assistance of a reporter appointed by him, keep a record of the transactions of the Society for publication.

5. There shall be an executive committee of five members, who shall confer with the President and assist him in conducting the affairs of the Society during its vacation.

6. State Fruit Committees, consisting of five members each for every State, Territory or Province represented, and a general chairman over all, shall be appointed biennially; it shall be the duty of the State Fruit Committees to forward to the general chairman, every biennial meeting, State Pomological Reports, to be condensed by them for publication.

7. A standing committee on Native Fruits, consisting of seven members, shall be appointed by the President immediately after his election. It shall be the duty of this committee to report annually on native Fruits, and also to examine, and, before the close of the session, report on all new seedling varieties that may be exhibited, and to make an ad interim report on those that were exhibited in an unripe condition at the meeting of the Society, but had subsequently attained a state of maturity; and on such other seedlings as may have been submitted to their inspection during the Society's vacation.

8. A standing committee on Foreign Fruits, consisting of seven members, shall be appointed, whose duties shall be similar to those of the committee in by-law seventh.

9. A standing committee on Synonymes, consisting of seven members, shall be appointed biennially.

10. Vacancies occurring in committees shall be filled by the chairman of each, and in case of his death or inability to serve, his place shall be supplied by the President of the Society.

11. The members of this Society shall pay two dollars biennially, and twenty dollars paid at one time shall constitute a life member.

#### 12. Order of Business.

1. Credentials of Delegates presented.

2. Address of the President.

3. Election of Officers.

4. Reports of State Fruit Committees.

4. New Business.

13. The Constitution and By-Laws may be altered or amended at any regular biennial meeting, by a vote of two-thirds of the members present. By order of the Committee, THOMAS HANCOCK, *Chairman*.

#### French Notions of the Census of the United States.

After complimenting our capabilities for growing corn and supporting stock, the *Journal des Debats* says:—

In the returns of the agricultural productions of the country, maple sugar is down for 32,759,000 pounds, and wine for 141,295 gallons. That amount is not very terrible for our wines, nor for Sherries and Madeiras, of which the Americans drink a large quantity. It is in Ohio and Pennsylvania that it is principally concentrated, and its quality is admitted to be below mediocrity. It is surprising that hitherto, notwithstanding all the efforts made, North America can not produce wine fit to drink. The vine is indigenous to the country, and grows there to an immense size—indeed, to such an extent that the Scandinavians, when they touched on the new continent, some centuries before Columbus, were, above all, struck with the appearance of the vines, and, in consequence, called the country Vinland, or the land of the vine[!] The bunches of grapes are of immense size, but the wine is detestable[!] The plants from Europe soon degenerate; but the Americans are continuing their experiments, and it is not impossible that they will succeed in the end.

—As the present result has shown, when we send choice samples to Europe. An American editor justly adds his comments to the above extract:—

Perhaps the writer would change his opinion about the quality of American wines, if he were to taste the specimens of recent manufacture from the vineyards around Cincinnati. The following paragraph, from the New York Times, gives the facts, in brief, relative to a new branch of rural industry

in the United States—the cultivation of the vine:—

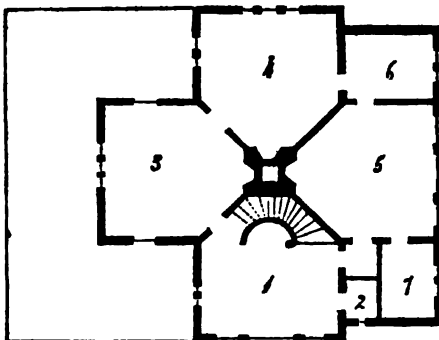
“The first largely successful experiment at wine-making in this country, was at Cincinnati; developed only a few years ago, chiefly under the auspices of Mr. Nicholas Longworth, an old and wealthy citizen of Ohio, and enthusiastically devoted to the grape culture. It has now grown into a business of public importance and large private profit. There are twelve hundred acres in cultivation, within a circuit of a few miles round Cincinnati. The annual produce is now about a million and a half of bottles of pure native wines, equal to the finest Hocks, Champagnes, and Red Wines of Germany and France. Mr. Longworth's Catawba Champagne is the most generally known at the East, of the Cincinnati vintage. Its popularity has so steadily increased as to create a demand much beyond the ability of Mr. Longworth to supply; and at this no one who has tasted the wine can be surprised.”

#### A Small Southern House.

[SEE FRONTISPIECE.]

A HOUSE on a small scale—of which, say the accommodation would be found sufficient with four principal rooms on each floor, each sixteen by eighteen feet, excepting the corners—might very economically and advantageously be arranged in the form of a cross. The plan would, in fact, show four apartments, all radiating from a center; that center containing the escape flues for smoke, and the fire-places for each of the rooms, together with provision for means of artificial ventilation.

But the rooms thus coming together to a center, would require a space left from which to radiate, amounting to a cube of the width of their ends; this would waste room. I would propose, therefore, that the corners of the rooms so connecting be cut off, leaving the inner end in the form of a half octagon. The cube then would only be that of the straight side of the octagon; say five feet square,—sufficient to contain all flues and ventiducts, and making an economical arrangement for the rooms. Passage ways would be saved by the ends thus coming together, one room opening into the other by a door placed in the sloping side.



GROUND PLAN.

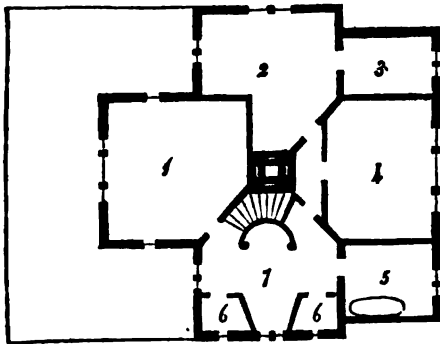
On the Ground Plan, No. 1 is the entrance hall; No. 2, a large and well lighted closet; No. 3, the principal parlor; No. 4, the dining room; No. 6, a large and light pantry, with space for store and china closets; No. 5, the kitchen; No. 7, the scullery, in which, if a cellar were excavated, might be the staircase leading thereto.

In the entrance hall is situated the staircase, running up with an easy curve, concentric with the half octagon end of the apartment. Under the stairway is a large hall closet; and in the hall is an inclosed vestibule, and an entrance to the kitchen. The hall would make a pleasant third room, particularly for afternoon occupancy, the sun being entirely off its sides, as it is to the east, and the inclosing screen forming the entrance vestibule could be made to fold back, if framed with slats, as a Venetian blind. From this projecting ten feet, a terrace floor would run round on three sides of the parlor, stopping against the corresponding projection on the west. This terrace would be screened from the sun by a peculiarity in the construction of the roof, which I propose should run straight through from north to south; not broken out at the projecting portions east and west, but extending clear over them, and continued the necessary width all along. Thus, over those portions of the building setting back, the roof would extend ten feet or more—thirteen in fact, as the projecting ends would require at least three feet to protect them; and this projection of roof would shade the terrace below. On the southern side, where the gable of the roof would show, I would propose a floor, on the level of the chamber

floor, extended over the terrace below, making a more effectual shade, and giving a pleasant walk out from the bed-room. At the gable ends the roof might be supported by rustic posts, with interlacing knotted limbs between their upper ends.

In the center, the chimneys so gathered together would allow a large flue in their midst for ventilation. The fire necessary at some portion of each day for culinary operations, would give sufficient heat to cause an upward tendency to the column of air within the central shaft, which should communicate by apertures above the floor, and and under the ceiling of each room.

The chamber accommodation of the floor above would comprise one large bed-room over the parlor, one over the dining-room, two over the kitchen, and a small one off the hall, the staircase not requiring the whole of the space. If needed, additional attic rooms might easily be obtained in the roof.



CHAMBER PLAN.

In the Chamber Plan, No. 1 is a large room over the parlor, one of its sides being left square, for the sake of forming a more convenient shape for a bed. The windows of this room would open upon the balcony floor, as would also those of chamber No. 2, and the one in the hall, No. 7.

No. 2 has a convenient recess for a bed, against the pier necessary for a chimney and ventilating shaft in the center of the building; and connected with this room is a large dressing-room, No. 3. No. 4 is a large and pleasant room for servants, and is over the kitchen. No. 5 is a good sized bathing and dressing-room. Nos. 6, 6, are large and airy closets, for linen and other clothes;

and No. 7 is the hall or vestibule, which, by reason of its pleasantly embayed window, would be a charming place for the lady of the house to sit in.

A home constructed upon this plan, with simple rustic posts supporting the roof and veranda floors, with the battened sides and with sharp roof, would look highly picturesque, and be of moderate cost. Here it would require an expenditure of about sixteen hundred dollars.—*Rural Homes.*

#### Rules for Laying Out given Surfaces.

THESE can be of little use to the surveyor, but may be of utility to refer to, especially to those who are not versed in the surveyor's art. In landscape gardening and rural embellishments a few such rules are often indispensable. In measuring land surfaces, the chain of two or four rods is used. A proper chain is 4 rods, or 22 yards, or 66 feet, or 100 links (of 7.92 inches) in length; and a square chain contains 16 square rods, or one-tenth of an acre. A wooden rod, 16½ feet in length, or a tape or rope of the exact length 16½ feet may likewise be used. The square acre contains 160 square rods, or 10 square chains, (of four linear rods each.)

To lay out an acre in the form of a square, measure one way, (say north,) 12 rods and 16 2-10 links, or 12 rods and 10 7-10 feet; then measure at right angles to this, (say east,) the same distance. To lay out the same in form of an oblong, measure one way 20 rods and the other 8, or so that one side multiplied by the other shall equal 160.

To lay out, 1st, an acre, 2d, one-fourth acre, 3d, one-eighth acre, in the form of a circle:—

1. Fix a center, and with a rope (radius) 7 rods and 3½ links in length, trace the circle (of one acre) on the ground.

2. For ¼ acre, use a measure 3 rods and 14 links in length.

3. For ⅛ acre, use a measure 2 rods and 13 links in length.

To lay out, 1st, an acre, 2d, one-eighth acre in the form of an equilateral triangle:—

1. Make each side of the triangle 19 rods and 5½ links in length for an acre.

2. Make each side of the triangle 6 rods and 20 links in length for ⅛ acre.

A plot of ground may be laid out having

the form of an ellipse or over, in the following manner, viz.: Set three stakes, not in a straight line, but say at the three corners of a triangle. Around these stretch a rope or cord. Then take away one of the stakes, which stake move along against the rope,

keeping it tight, and it will trace out an ellipse.

If proper I will send some simple rules for surveying land and for multiplying chains, links and rods, etc., with remarks on the use of the compass.

SALISBURY.



## The Garden.

### BULBS.

THE readers of the Review often inquire, "what has become of Dr. KENNICOTT?" Being charitably disposed, and in full sympathy with him, while obliged to use an amanuensis in preparing the copy for this number, I urge in extenuation that the Doctor has been suffering with an affection of the eyes for some months past. But, lo and behold! while reading that welcome exchange from the North-west, the excellent Wisconsin Farmer, the Doctor appears in his pleasant style, descanting upon the garden, with its beautiful and fragrant ornaments, as though he were possessed of all his faculties in the highest degree of perfection. The following notes of his are seasonable, and are commended for their distinctness and general correctness, and it is hoped that the suggestions will be practiced by all who have not already supplied their gardens with a collection of these beautiful vernal visitants.—Ed.

#### Bulbs.

All nature is full of the beautiful, and the meaning of this is very evident, though not always understood. The Creator has been very good to us, and you may rest assured that flowers were designed to influence man

as well as continue the species to which they belong.

There is more good sense and practical utility in the cultivation of beautiful flowers than most people imagine. Whatever refines and simplifies the taste, and enlarges the sphere of innocent and rational enjoyment, is always useful in social and intellectual life, though it may not be necessary to mere animal existence.

The love of flowers is, in an eminent degree, salutary and humanizing; and the little time and expense required for their cultivation, yield a greater profit, in pure pleasure and mental refinement, than any other home luxury.

Cultivate flowers, and learn to love them, my farmer friends, if you would add to the pleasures, and increase the sweet influences of home. The greatest and the best have loved flowers, and cultivated them with their own hands; and every right minded and observing man has borne witness to the delights of the practice, and its good influence on others. It has often been said, and can not too often be repeated, that the child taught to love flowers and tend them at home, is more apt to love and respect all home pleasures and duties, than the one whose eyes have never been opened to the beauties of nature, or whose young hands have never planted, watered or weeded a single shrub or flower.

There is no luxury so cheap as green

leaves and brilliant or deliciously scented flowers. There is no external ornament so indispensable to the respectable farm-house, suburban cottage, or lordly mansion, and there is no other mere embellishment of a home so universally admired, so entirely appropriate and perfectly democratic, and so completely within the means of the poorest laborer, who owns a rood of God's own beautiful earth, and has the will to improve it.

By the tasteful and careful display of a few native trees, vines and flowering shrubs and plants, or by the purchase of five dollars' worth of them, the log cabin or the rough board shanty can be made more worthy of note than the most costly edifice, with staring brick walls, and not a green tree or a gay flower to soften its hard, dry, money-begotten aspect, or relieve its cold and uninviting entrance. But my sermon is somewhat too long. Let us proceed.

I enter upon this subject now because autumn is the *only time* for planting some very desirable flowers, and the best time for others. Nearly all the hardy **BULBS** must be planted late in summer or during autumn, and October is a good month for this work. Many **TUBERS** are more certain to do well if planted in autumn also. Still, these may be left until spring.

**BULBS** and **TUBERS** are sometimes confounded, but a familiar example will show the difference. The onion is a "bulb," the potato a "tuber."

For most bulbs to be planted out in October, the soil should be enriched with well rotted manure, leaf mold, etc., and the whole well mixed, deeply spaded and finely pulverized a few weeks before planting, so that the soil may have time to settle and pack together. A heavy soil, containing a good portion of clay, is the best for most bulbs, if made rich enough, and dug two feet deep, and well drained.

Bulbs of large size should be planted from three to four inches deep, small ones from one and a half to three inches, reckoning depth from the top of the bulb when planted. They must always be so deep as not to be easily uncovered by rains, etc.; and as an aid in this, and to prevent injury to the fibrous roots by the lifting power of frost, it is a good thing to tread or pack the bed hard after planting.

Rows one foot apart, and nine inches in the row, is a good medium distance for single bulbs of most kinds intended to be taken up every summer. Large ones, like Crown Imperials and Tiger lilies, require more space, and so do all, if you design to leave them several years in the same bed without dividing and replanting.—Bulbs may be had of the seedsmen or nurserymen. We have a very good supply at the Grove Nursery, and my excellent friend Jas. Dougall, Detroit, Mich., is especially well supplied with tulips and hyacinths.

The price, under name, ranges from 25 cents to \$2 per dozen, seldom over 25 cents per root; and good "mixed varieties" as low as \$1 per dozen for such as once cost \$1 or more apiece. And this is the best way to purchase them.

THE CROCUS is a very pretty little bulb, quite hardy, and easy of cultivation, and most of the varieties are among the first flowers of spring. Indeed, I have seen a south border gay with them, and an old snow bank slowly melting away on the north side of the same bed. The colors of the crocus are much varied, and often beautifully mixed. The plain colors are white, blue, purple, bright golden yellow, etc.—The crocus is a great bloomer, and will stand the hardest frost when in full flower. There is an autumnal variety that comes into bloom about the commencement of cold weather in the fall, when there is little else in flower.

The beautiful little blue **SIBERIAN SQUILL** flowers early, (March and April,) but is not common.

THE TULIP is the most gorgeous and most renowned of bulbous rooted plants. A small fortune has, in times past, been paid for a single flower, and an immense capital sunk in a single collection, during the rage of the "tulip mania" in Holland. Five to five hundred dollars per root was freely paid; and now, about as good plants may be had at 25 cents each.

The colors of the tulip are infinite, and the "feathering" and blending delicate and chaste beyond the power of imitation.

The **DUC VON THOLL** flowers early in April during the continuance of severe frosts; but the sweet month of May is the proper tulip season in this region. [April, here.—ED. REVIEW.]

Unlike other flowers, double tulips are less prized than single ones, and those most showy are often of the least value. It is a good thing to tie up the tall stems of the largest flowers, and if you can afford to cover your bed with an awning, the flowers will last much longer, and retain their freshness and brilliancy to the last. Eight dollars will purchase a bed of mixed tulips, which will make a more magnificent show (with its hundred goblet-shaped flower cups of every hue, on stems two or three feet high, and this repeated and increased yearly) than ten times that sum expended in less sensible ways. Few people ever see really fine tulips, however, in ordinary cultivation, and poor ones are scarce worth having.

**THE HYACINTH.**—Here, now, is a plant that, should you happen to get a variety not quite so beautiful in form and color, will be sure to give satisfaction if you enjoy the the most exquisite perfumes. And then a fine hyacinth is very beautiful, withal; and though not quite so varied in colors, they are rich and elegant. The double varieties are most sought for, but some single ones are valuable. This plant blooms pretty well in a deep glass of pure rain-water in the winter parlor, but the bulb is often ruined by this mode of flowering. Potting is safer, where bulbs are scarce. Good hyacinths cost 25 cents apiece, and often much more.

The little grape hyacinth is cheap and multiplies rapidly.

The **NARCISSUS** family contains many desirable early blooming plants, some of them extremely fragrant.

The **POLYANTHUS**, **DAFFODIL**, **JONQUIL**, **POET'S NARCISSUS**, etc., belong to this tribe.—Some of them increase with rapidity, and all are more or less desirable. They are mostly cheap.

**THE GLADIOLUS.**—Some species, and those the most beautiful of this very showy genus, are tender, and must be kept from frost, and planted out in May. But the numerous varieties of the **GLADIOLUS COMMUNIS** are hardy, and should be set in autumn.

**THE BULBUS IRIS** has many rare and perfectly unique varieties, but, except the English sorts, we have found them rather difficult of cultivation, the Spanish Iris especially so.

**CROWN IMPERIALS** are coarse plants, and some of them with a strong and disagreeable odor, yet they are extremely hardy, and quite showy during the hardest frosts of spring, and are desirable in clumps in the least frequented parts of the garden or lawn.

The **TIGER LILY**, **ORANGE LILY**, our splendid **NATIVE LILIES**, and many others which I have no time to mention in this already extended article, are all showy and desirable plants, costing a mere trifle.

The **WHITE LILY** has not done very well with us. It is an exceedingly fragrant and very desirable flower.

JOHN A. KENNICOTT.

THE GROVE, Ill., Sept. 3.

#### Indigenous Flowers.

In most of our premium lists, awards are offered for bouquets, or collections of indigenous plants; but how seldom do we find their beauties appreciated, or competitors coming forward with collections at all commensurate with the premiums offered.

It is pleasant to learn, by a communication from C. DEWEY, in the *Rural New Yorker*, that there are exceptions to this, as we find to have been the case at a recent horticultural exhibition in Rochester, where Mr. PHILO PARKS presented fifty-eight species of native plants in fruit and flowers, the produce of a small piece of land which he has carefully preserved for their especial cultivation. Prominent among these were the beautiful Fringed Gentian; Clematis virginica; Potentilla fruticosa; many of the beautiful Asters and Solidagos; Lobelias, and other brilliant autumnal flowers and fruits.

#### Tan-bark on Strawberries.

Dr. WARDER:—Having perused with much interest, an article upon the great advantage derived from Tan-bark on strawberry beds, written by a talented horticultural writer in an Eastern publication, I beg to offer a simple observation which has oc-

curred to me this season, when I have had an ample opportunity of testing its virtues, in which I have no faith. In the month of May, I directed one of our garden laborers to prepare soil, for potting runners to renew our strawberry beds, say two-thirds of fibrous loam, to one of decayed stable manure from an old hotbed. But from some neglect of the man, he had, to a considerable extent, prepared the mixture from an adjoining bed of old tan, that had been used as plunging material, for cuttings, etc., and it was not until the replanting operation was going on, that this mistake was discovered, which was then too late to be rectified, as we had saved but few plants more than we actually wanted. And wherever this tan mixture predominated, the plants have entirely dwindled away, say a hundred and fifty, or more; while others on the same ground that had escaped the injury of the tan, grew luxuriantly. VERITAS.

REMARKS.—My friend "Veritas" has no doubt made a true statement. It is altogether probable, that a large proportion of tan-bark in a mixture of soil, would be injurious to young plants in the pots; and yet, we have abundant testimony in favor of the use of this article, without one word respecting its detrimental effects upon the plants, while many of us here frequently witnessed the young runners striking very freely into the fresh tan of a garden walk. Some cultivators, have, indeed, especially recommended this substance for the purpose of propagating young plants.

The application, however, of tan-bark, has been recommended not only for mulching the plants, but also as a special manure, because of its containing tannin, one of the proximate elements of the strawberry.—ED.

#### Spent Tan.

A WRITER in the Pennsylvania Farm Journal states that he has been using spent tan-

bark in his garden with the best results.—The soil on which it was tried was a "*stiff clay*"—altogether too stiff for successful gardening."

The editor of the Journal sustains the opinion of his correspondent, in some experiments made in his own garden.

We have little faith in the use of spent tan-bark as a manure, but a good deal in using it in *compact soils*, clay, and stiff loams. Chips from the bottom of the wood pile, saw-dust, or any coarse litter, would have much the same effect. The benefit arises mostly from making a heavy soil, light and porous—admitting air, warmth and light, and bringing its fertilizing powers into activity. Such heavy, inactive soils may be found upon most farms, where a judicious application of the tan-bark, and other coarse and cheap materials, would bring them into a productive state. But they need the same careful attention that the merchant bestows upon his affairs, in order to make any part fruitful of profit.

Let nothing, then, be lost—the washings by the road side, the tan-bark, chip manure, brakes, leaves and refuse meadow grass, will all have a fine influence upon the cold, compact soils.—N. E. Farmer.

#### Stowell Corn.

I AM pleased to learn by a communication in the New Yorker, that Mr. Wetherell has succeeded, under unfavorable circumstances, in growing this new variety of corn which promises so well. While at Detroit, attending the interesting State Fair, held at that city on the 22d of September, I also saw quite a large patch succeeding admirably upon a light sandy soil, at the flourishing nursery of Messrs. Hubbard and Davis, who informed me that it entirely equaled their expectations as a productive and useful crop, and that they looked upon it as a very valuable variety of sugar corn, the only sort that should ever appear at the dinner table. The only difficulty attending its cultivation, however, appears to be to get the seed sufficiently dry for preservation. This, with the great demand, accounts for the high prices,

(\$30 per bushel) paid by the New York seedsmen.

#### THE STOWELL EVERGREEN CORN.

By the kindness of R. G. PARDEE, Esq., I received the last winter a sample of this new variety of sweet corn. I planted it the 13th of May in sandy loam,—a cold rain succeeded, and out of the fifty-two kernels planted, only nine came up, and these were so late I had given up hopes. And then it was so sickly, and grew so slowly at first, that there seemed but little chance of success. This was perhaps owing in part to the condition of the soil, which was really light and unmanured. I gave it such a situation, partly because I wanted to give it a strong test, but more because I had none better, unless in too close proximity to other varieties. It received no attention further than sufficient hoeing to keep the weeds down and the ground light.

The result is much beyond my anticipations. After a while it came forward vigorously and rapidly. The plants threw out strong suckers, and grew to the ordinary height of our field varieties on good soil, but much more robust and with wider blades. Three and four good sized ears set on the main stalks, and one to three on the suckers. Thus, from one root in one hill I counted seven good ears. It stood our excessive drought better than any other variety. If further trial should establish these fair results as permanent traits, the Stowell evergreen corn will be indeed of much value to the farmer, especially for soiling stock and for winter feed.

T. E. W.

#### Pulling Turnips.

PULLING turnips and cutting off the tops by hand and knife, which is almost the universal practice among American farmers, is about as far behind the age of improved husbandry, as digging up the land with a hoe instead of plowing. In England, turnips are almost invariably planted in drills. At pulling time, the laborer passes along the row with a sharp, light hoe, with which he dexterously cuts off the tops, throwing them by the same motion into the hollow between the rows. Another person follows with another hoe, which he strikes into the bulb, so as to cut off the tap root, throwing the turnips of two rows together ready for the gatherer to

basket and carry to the pile or cart, for storage. Sometimes one hand performs both operations of topping and digging, but two work to the best advantage.

Great skill is acquired by practice in cutting the tops, as well as dexterously raising the roots.—*Rural New-Yorker*.

In my apprenticeship we practiced another plan which was to pull up the turnip with the left hand, and with two rapid blows with a stout knife, strike off first the root and then the tops, while it was suspended with an upward swing by the left hand over the furrow to our right; the tops were then thrown into the furrow to our left. Returning across the field on the next drill, and pursuing the same process, the result would be, that each alternate space would contain the turnips or the tops of two rows, which could be gathered at leisure.—ED.

#### New Pelargoniums.

THE May exhibitions of the London Horticultural Society at Chiswick, and the Royal Botanic at Regent's Park, were especially rich in new and splendid pelargoniums, and the stands of both nurserymen and amateurs contained some most superb varieties, which attracted much attention. We give the names of the sorts in Mr. Turner's collections which took the first prizes, both show and fancy.

*Show Pelargoniums*.—Mochanna, Pulchra, Gulielma, Pride of the Isles, Magnificent, Virgin Queen, Constance, Magnet, Ajax, Rosamond, Chieftain and Rowena.

*Fancy*.—Minerva, Perfection, Reine des Francais, Hero of Surry, Statinskii, and Fairy Queen.

These were first at the Chiswick show.

*Show Varieties*.—Magnet, Mochanna, Prince of Orange, Ajax, Chieftain, Chloe, Magnificent, Pride of the Isles, Constance, Rosamond, Little Nell and Alonzo.

*Fancy*.—Hero of Surry, Reine de Francais, Minerva, Carlotti Grisi, Fairy Queen, and Empress.

These were first at Regent's Park.

Several of the fine sorts have been in flower in our collection, and we add descriptions of the show varieties:—



*Ajax*, (Hoyle's) lower petals rosy purple, top petals dark purple, with margin of rich crimson; free bloomer and good habit.

*Beauty of Montpelier*, (Rendle's) lower petals bright pink, white center, rich velvety crimson maroon spot in upper petals.

*Brilliant*, (Topping's) deep rich superb color; very attractive.

*Flavia*, (Hoyle's) bright orange scarlet, the finest color of the kind.

*Gaiety*, (Foster's) bright salmon, bright crimson blotch in each petal.

*Major Domo*, (Beck's) large rose-colored flower, with dark clouded top petals.

*May Queen*, (Hoyle's) orange rose-top petals, crimson blotch, shaded off with orange, the five petals have a delicate margin of pale pink; lower petals vivid rose, large well defined eye; a large, distinct, superb and free blooming sort.

*Mount Hecla*, (Gaines') brilliant scarlet with crimson spot.

*Ocellatum*, (Hoyle's) lower petals bright pink with a distinct and constant spot of deep crimson; top petals deep crimson spot, shaded off with bright rose, white eye; a novel and striking flower.

*Prince Arthur*, (Pontey's) dark clouded blotch shaded off to flesh; lower petals flesh color; center white.

*Salamander*, (Gaines') fine orange scarlet crimson.

*Tyrian Queen*, (Beck) mulberry top petals; very distinct variety.

Several other new ones have not yet bloomed sufficiently strong to give a description of their colors.—*Hovey's Magazine, from Gard. Chron.*

#### Irish Potatoes from Slips.

OUR venerable and much admired, though unseen friend, Colonel WILLIAM MURRAY, of Catoosa Springs, Walker county, Georgia, is quite a horticulturist. He has already contributed some valuable information respecting the Catawba Grape, which has been laid before the readers of the Review.—To him we are now indebted for seeds of a very fine white blackberry, that have been distributed at our Horticultural Society. We should rejoice to hear from him more frequently.

Read his method of growing the potato, which may have some merit where it is difficult to procure the roots for planting. His recommendation to grow seedlings will accord with the advice of others.

Mix two bushels of charcoal with one bushel of air-slaked lime for every fifty bushels of potatoes, and sprinkle the mixture through the potatoes immediately after moving them from the field. In this way you may keep them perfectly sound until the spring.

Inasmuch as seed potatoes are with difficulty obtained at any price, I have been planting the Irish potato for the last three years by drawing the slips, and find that they produce in this way quite as well as the yam potato. One bushel of Irish potatoes planted in this way will produce more than two bushels planted from the seed.—Bed them as you do the yam, draw the slip, open a wide furrow with the plow, and plant them in it on the horizontal plan, as you do grape cuttings, leaving from two to four inches of the top out of the ground.

Mr. Cobbett, in an essay on the Irish potato crop, written in 1816, predicts that it will eventually fail. To this opinion we dissent. The Irish potato is a native of America, where it grows wild, and was transplanted in Europe, where it became an indispensable article of food, and where it has been cultivated with great success under forced culture. Neither is the Irish potato a native of the Northern States. And yet we have been hewers of wood and drawers of water to the Yankees until we have forgotten when to dig our own potatoes or how to save them. Necessity now forces us to change our system of agriculture. The original stock of potatoes has become exhausted. We must renew it. Draw from your present crop slips or vines when from eight to ten inches long; plant as before described, in good loose free soil; gather your potato apples or balls, and you will get a fresh start. By drawing the slips, you get clear of the parent potato which is diseased. The potato apple will probably produce several kinds of potatoes, and a premium of \$100 by the Southern Central Agricultural Society would probably bring the energy of our farmers to bear on this subject, and bring to

notice new and improved varieties. I am satisfied that our people do not appreciate the value and importance of seed raised on our own soil in our own climate. The Cincinnati Society has offered a premium for the best seedling strawberry.

I live in a grape-growing, corn-raising and vegetable and fruit country, in sight of the Catoosa Springs, where my experiments may be seen by calling.

#### Sweet Potatoes.

MESSRS. EDITORS:—Agreeable to your request in the May number of the Farmer and Planter, I now take my pen to give you my small experiment in the planting and culture of the sweet potato. You gave us in that number the experience (or practice) of Mr. James T. Fergusson, which is very good, but it is old fashioned. The ridge is the present mode here—some very large and some small, and in various ways. I have, for the last few years, planted the easiest and cheapest way I have ever seen practiced, and have succeeded as well as by any other mode. I break my land about eight inches deep in the winter, then manure, broad-cast, just before planting. I plant in the first part of April—laying off my rows four feet wide, then throw up in a bed, with a good turning plow, four more furrows just as I would to plant cotton that distance. I then cut the potatoes in pieces to prevent them from growing, and to plant further.—I chop with a hoe about eighteen inches apart—if I doubt the potatoes coming up well, I put two pieces in each hole, then draw a hoe full of earth on them. I draw no earth with the hoe to make a bed until the last working, which I do when the vines will nearly cover the earth. After planting, I plow and hoe just as I do cotton, until the last working, when I use the turning plow again, and draw the earth with the hoe to the roots of the vines. Potatoes are not more troublesome to tend than cotton when cultivated in this way, and not more than half the labor that is required to plant in hills, which is a great saving in work, not only in cultivation, but also in digging. This operation may be performed with the plow, instead of the hoe, if you desire. I do a part of my digging with the plow.

In addition, I consider the potato crop, if

well managed, the most profitable of any other that I am acquainted with the culture of—and yet, its cultivation is but little practiced or on a very small scale, in proportion to its importance, by most persons, myself not excepted—its great value not being properly appreciated. The two past years have not been surpassed under my knowledge for the extreme scarcity by droughts. Yet under such extremes, I gathered from about three-eighths of an acre of land at the time of digging and housing potatoes, about sixty bushels each year, which were worth as many dollars; equal to one hundred and sixty dollars per acre. It is astonishing that it should take us so long to learn when our opportunities are so great, yet it has been so. An aged gentleman informed me a few weeks since that he had gathered about three hundred bushels from one acre. B.

SILVERTON S. C. 1852.

—*Farmer and Planter.*

CULTURE OF TOMATOS.—A correspondent of the Genessee Farmer says, that his plan is, to plant the seed in good, rich ground, and allow them to grow until they have made two, three or four shoots from the stalk; after which, prune all the side shoots that come out; and follow this plan all through the season, every three or four days, and let the vines grow the full length, never pinching off the ends. In this way I can raise earlier and better tomatos than by any other plan, also a great many more of them. It is necessary to stake the vines up to keep them off the ground, and they will then grow from seven to nine feet long, with large bunches of tomatos at the ends of the vines. Some of my neighbors have tried this plan and pronounce it far superior to every other.

Others recommend allowing the plants to rest upon the ground and throw down new systems of roots, after which they may receive judicious pruning to advantage.—Ed.

FLOWER THIEVING.—*A Capital Idea.*—A gentleman in Lowell, Mass., lately sprinkled some cowage on the petals of a peony which stood near his garden fence, as a trap for persons who had often taken the liberty of helping themselves to flowers as they were

passing. The bait took—a lady and gentleman were shortly after noticed most vigorously rubbing their noses, and doubtless wondering “how they came so.” On the princi-

ple that the hair of the same dog will cure the bite, it may be supposed that the itch caused by the cowage effectually cured the itch for stealing flowers.—*Exchange.*



## Pomology.

### ROME BEAUTY.

**DOCTOR WARDER** :—Since the fact has become permanently established and universally admitted (wherever well tested) that the Gillett's Seedling, or Rome Beauty apple, combines more valuable qualities, and will give a greater amount of clear profit from a given quantity of land than any other sort ever fairly tested in the West, and as the origin of the variety has become a matter of controversy, and as statements made by the late Doctor Barker, of McConnellsville, and also those made by gentlemen from Washington county who exhibited specimens at the first Ohio State Fair, represented them as having been produced in the old Putnam orchards in that county, I feel it due to all who feel an interest in pomology, and to myself, that a fair and impartial history and description be given and published in the *Western Horticultural Review*.

In the spring of 1817, my father, Zebulon Gillett, and two uncles, Joel Gillett and Nathaniel Pritchard, (all of them living near Israel Putnam's, in Washington county,) having purchased lands in the Quaker Bot-

tom, Rome township, Lawrence county, O., each of the brothers purchased a quantity of fruit trees of Israel Putnam, comprising all of the sorts in his selection, for the purpose of planting on their lands in this county. I was then in my 19th year, and was present, and assisted in selecting, digging, and shipping the trees on board of a small flat-bottomed boat.

Mr. Putnam's practice was not, as stated by Doctor Barker, to pull up and throw away all the seedlings he found in the rows. His practice was to sell each separate grafted tree for 25 cents, and where two or more trees were attached together, whether all grafted, or all but one seedlings, he sold the lot for the same price; that is, he sold the root for 25 cents. If the purchaser saw fit to saw it asunder, and make two or more trees out of it, he could do so. I well recollect my father had in his lot a goodly number of double, and several triple trees, all of which were grafted, however. Mr. Putnam's practice was to saw off and graft at the surface of the earth, and then draw the

dirt up nicely around the graft, covering the stump entire, thus saving the necessity of using either grafting wax or bandage. The natural consequence was, that when a graft failed, numerous sprouts came up from the root, and were, when large enough, grafted in the same manner. Consequently, some two, three, or four trees were occasionally found connected; and if the Rome Beauty ever came from Putnam's nursery, it was in this wise:—A seedling sucker had by carelessness been permitted to rise from the root of a tree that had been grafted at the surface. Admitting this to be the fact, Mr. Putnam deserves very little credit for originating the variety, as he aimed to consign it to oblivion by sawing it off and endeavoring to change it into another sort; and certainly not, if, as Doctor Barker stated, Putnam called all of the seedlings that intruded themselves into his nurseries, Democrats, and pulled them up and threw them away as unclean.

I will now state a few facts that render it exceedingly doubtful whether the original Rome Beauty tree was ever brought from Putnam's nurseries.

Some two or three days after the above mentioned three lots of trees were dug and put on board of the aforesaid boat, uncle Pritchard took me several miles further up the Muskingum river to help him dig a lot of seedlings which were on a farm near the upper end of Rainbow, then owned by Herman Trowbridge, who was a son-in-law of uncle Pritchard. We brought the trees down in a large pirogue. Those trees were thrown into the boat with the trees purchased of Putnam, and the three old gentlemen started down the river with their boat to plant their trees on their newly purchased lands. Two of them left their families to remain another year. They landed at Point Harmar, and there procured fruit

trees, shrubbery, flowers, etc., of Judy Fearing. They next landed at Belpre, and there procured various sorts of fruit trees, some of which are still growing on my premises. They also landed at Gallipolis. I am not certain whether they procured any trees at that place or not. I recollect very well that there was some swapping of trees among the old gentlemen in order to suit their several notions about varieties. How many exchanges either accidental or intentional were made, no one can tell, as all three of the old men are dead and gone many years ago; and consequently it would have been a difficult matter for Doctor Barker to sustain his declaration that Joel Gillett never was the first owner nor the first purchaser of the parent Rome Beauty tree, and that it originated with Israel Putnam, of Washington county.

Moreover there is a possibility, if not a strong probability, that the tree had its origin on the very farm where it now stands, as the farm had been improved and inhabited by squatters for many years before my uncle purchased it, and as there were at that time bearing orchards in the neighborhood, both above and below. One thing goes strongly to prove that my uncle either found seedling trees on the farm or procured them elsewhere than of Putnam, which is, that he planted one whole row of seedlings across his orchard, and directly in the fence row. Among these was found the Rome Beauty. Now it is not at all probable that Joel had so many seedlings to fall to his lot, (purchased of Putnam) from the fact that my father had but one solitary seedling in his lot, and that was labeled Cooper, through mistake, no doubt.

Now for a description of the variety.—The tree is of unusually thrifty growth, and upright habit; propagates more kindly either by bud or graft than most other sorts;

invigorates and imparts new life to scrubby stocks when worked on them; stem or trunk large at the base, with a regular and more than ordinary taper to the summit; bark unusually smooth; branches numerous, very large at base, rather short, exceedingly tough, and seldom break under enormous loads of fruit; decidedly the earliest and most excellent bearer among more than 400 sorts cultivated in this bottom.—Fruit bright red on yellow ground, occasionally mottled with dark red and russet about the base; flesh yellow, tender and juicy, with slight subacid and sweet agreeable flavor. Fruit hangs on the tree late, free from bitter-rot, keeps well through winter, commands a higher price both here in the orchard and in the southern market than any other sort, improves very much in size, color, beauty and flavor, by remaining on the tree very late. The parent tree is now groaning under an enormous load of fruit, while most other sorts are either a partial or entire failure.

W. N. GILLET.

EVERETT, Aug. 30, 1852.

#### The Curculio.

"A CORRESPONDENT of the Boston Journal says, Take cotton batting, put three circles six to twelve inches apart around your plum-trees, and these will catch the curculio. He caught sixty in the first circle in twenty-four hours; in the second circle but few had been caught; in the third circle scarcely one got so high. He found this a sure preventive, and got lots of fine plums last year, for the first time for many years. He further recommends keeping the ground free from windfalls, as they contain the maggot, which goes into the ground to mature itself."

We give place to the above, as to all other recipes offered for doing away with the curculio, but without indorsing it, as our own experiments thus far have been entirely ineffective. The story so often told of plum-trees being protected from the curculio by chickens, is not true; at least we can say so confidently in our own case. We have in

our hen-yard a number of plum-trees, all of which have been regularly affected by the curculio, without showing any advantage as compared with the trees outside the hen-yard.—*Working Farmer.*

#### Plums, the Curculio, Iron Graperies, etc.

I SEND you a basket of Pond's Seedling Plums, which I have succeeded in raising for the second year, as well as several other later and finer varieties, by syringing the trees with a mixture of lime and sulphur, just after the fall of the blossom, which I repeated three times a week for four weeks. The mixture was made in the following way: Having a barrel upon wheels, I had a thick whitewash made, such as is generally used for whitewashing walls; to this I added eighteen doublehandfuls of flour of sulphur.—After it was thoroughly mixed it was applied to the trees with a valved syringe, having a spout with a lip to it, which flattened the stream as it passed out, and was thus dispersed over the tree.

The sediment of the above barrel furnished sufficient strength to have it filled twice more with water only.

Those of your readers who know the difficulty of raising smooth skin fruit in sandy soils, will, I trust, remember the above, and try it the ensuing season; and if thoroughly done, I will guaranty that they will get the upper hand of that little Turk, "the Curculio."

—*Ibid.*

I am yours, respectfully,

THOMAS W. LUDLOW, JR.

HERE is another plan which comes highly recommended by Mr. Ludlow, of Layville, L. I. It will be recollected by the readers of the Review, that a similar application was found to be efficacious by a farmer in New Jersey. One swallow does not make a summer, nor is one fact sufficient basis for a theory; but upon a question in which we are all so deeply interested, and about which we know so little, two similar facts, recorded by separate observers, are certainly worthy of our attention, and should induce some one to add others either confirmatory or contradictory. Mr. L. says:—

I have a remedy which, as far as my ob-

servation and personal experience extend, is thoroughly efficacious. It is simply after a shower, or before the dew goes off in the morning, to throw *plaster of Paris* over the leaves and fruit. One or two applications is always successful. The plaster of Paris in any quantity is not injurious to vegetation, but rather the reverse, and it seems to destroy or drive off the whole insect tribe.

Melons, cucumbers, squashes, and all other growing plants, which are attacked by the destructive *striped bug*, can be completely protected by a sprinkling of plaster. I have never yet failed in an application, and I therefore write to you the above, as to my own observation and experience.

Yours, respectfully,

—*Ibid.*

WM. H. LUDLOW.

#### New Fruits tested at Boston.

*Strawberries*.—New Pine, and Burr's New Pine, of high flavor and very fine. Early Virginia, Hovey's Seedling, and Jenny's Seedling, the most profitable and best for general cultivation near Boston.

*Cherries*.—Monstreuse de Mezel, resembling Black Tartarian.

*Melon*.—Christian—"not yet equaled," raised by Capt. Lovett, from a green Malta, impregnated by a very early variety, and for which the society awarded fifty dollars.

*Blackberry*.—cultivated High Bush—well worthy of cultivation—remarkable for size and beauty.

*Raspberries*.—Knevett's Giant, Franconia, and perhaps Fastolf—worthy of a place in every garden.

The Northern Spy apple has again borne, but "the committee see no reason to alter the opinion they have before expressed, of the unsuitableness of this variety for general cultivation in this vicinity." Caution against hasty decisions is, however, shown by the fact stated by the committee, "that what is now beginning to be regarded as one of our best winter pears, the Glout Morceau, was but a few years since almost condemned as nearly worthless."—*Albany Cultivator*.

#### A Plan for drying Fruit.

I HAVE a house six feet square and seven feet high, with a tight floor; at bottom and top the frame is made of scantling about three inches square, with three posts on each

side; these three side posts have inch holes through them six inches apart, from bottom to top, to receive inch pins, eighteen or twenty inches long, to sustain the shelves containing the fruit. The shelves used are half inch boards, five feet ten inches long and ten inches wide, with the corners at each end a little rounded, so that they may be taken out and put in handily. Two of these boards lie on one range of pins—one board of twenty inches would do, but is rather heavy when filled with green fruit. A door two feet wide and seven feet wide is about right; let it be in the center of one end; it is then convenient to stand outside and slip in the shelves filled with fruit, either to the right or left. A small stove placed in the center completes the fixture, except a covering to the building, which may be attached to it, or be a separate concern.

Any farmer who has a tolerable supply of sprightly boys and girls, can in one night, from dark till bed-time, prepare enough fruit to cover all the shelves in the house just described, which will make more than a bushel of dried fruit; and twenty-four hours is sufficient to dry it completely, by keeping up a moderate fire in the stove. The temperature in the dry house should be about 150° Fahrenheit, which is easily maintained if the house is tight. About three hundred feet of well seasoned boards will suffice for the whole concern, which should be tongued and grooved.

A workman can make it in two or three days, and when once made, it answers for many important purposes besides drying fruit; and if insects are likely to trouble your dried peaches or apples in the spring of the year, remove them to the dry house, and subject them to a heat of 150° for several hours, and it will effectually remedy the evil.

MICAJAH T. JOHNSON.

SHORT CREEK, Harrison Co., 7th mo., 1852.

—*Ohio Cultivator*.

#### Skinning Old Apple-Trees.

WE last year made some remarks upon the subject of stripping the bark from those old apple-trees, which, while possessing a fair share of vigor, seem nevertheless to be hide-bound, and do not bear fruit as a good apple-tree should. Stripping the bark from the trunk about this time of the year, when it will strip easily, has been recommended

by some as a good remedy, being careful in the operation not to disturb the alburnum, or sap-wood that is forming. We believe we mentioned that some experiments were made last summer—one of them on an apple-tree belonging to John May, Esq., and the other by our old friend Smith, the "venerable hatter" of Winthrop. The tree operated upon by Mr. May had not borne for many years, if it ever had. The bark was stripped off the trunk, the alburnum hardened into new bark, and now the tree has an abundance of little apples upon it.

How often or how far it will do to carry this removal of old bark from apple-trees is yet a matter of experiment. But, in the few instances that we have heard of or seen, it has been productive of good to them. The trees operated upon were all old and barren trees, and had bark upon them as thick as the *pelt* of a rhinoceros.—*Maine Farmer*.

This is no new experiment, first discovered perhaps, by accident, where some horse had stripped off the bark for a varied diet, just at the period when the descending sap was prepared to deposit the new layer of wood and bark. Great care should be taken to ascertain the right season for this operation, which, though it have proved successful, I should consider of very doubtful propriety in every-day practice. Better far to cleanse the old outside, and assist nature in the more normal process of exfoliation of the dry and useless cuticle, that has annually been accumulating.—*Ed.*

#### Theory of Pruning.

MR. LAWRENCE YOUNG closes his series of interesting articles upon this subject, which have appeared in the *Horticulturist*, by summing up with a few comments upon certain of the processes in the art of pruning and training, which in a former number he has styled debilitants of the wood-producing force, applicable in the hands of the cultivator as remedies where unproductiveness results from over-luxuriance, or as preventives in cases where in a state of fruitfulness

the habit of a tree or plant indicates a tendency to the production of too much wood growth. These processes are:

1. Stinting supplies of food.
2. Neglected cultivation.
3. Retarding the circulation.
4. Breaking the circuit of circulation.

The first of these processes comprises the two very common expedients now practiced to superinduce a state of fruitfulness—root pruning and dwarf working. Every tree at the extreme points of its rootlets receives its supplies of food, which there enter into the circulation by reason of the mysterious attraction of the thicker sap within for the thinner fluids without (by *endosmose*;) and nothing is plainer than the fact that, other things being equal, the size and vigor of trees and plants are to each other in proportion to their number of spongioles and the space they pervade. It is impossible, therefore, to diminish the number of these rootlets or the area over which they range, without lessening also the amount of food carried into their general circulation, and by consequence the share of each bud. The effect of this operation is very generally understood and appreciated and also its application as a means of superinducing fruitfulness. Mutilation of the roots (and root pruning is only mutilation, nothing more or less), lies at the foundation of that very salutary rule, heading-back the branches when large trees are transplanted. In this case the demand for food is reduced until the enfeebled condition of the rootlets can meet the requisition.

Most fruit trees and many plants are liable to a catastrophe which might be termed, not inaptly, accidental pruning. I refer to that strangulation or suffocation of the rootlets resulting from seething and baking rains, experienced in hot seasons. A visitation of this kind often seems to arrest the circulation and to bring on a premature decline and fall of the leaf. The cherry, apricot, and plum are most liable to this affection. Sometimes, however, the apple and pear are not exempt. I have myself witnessed instances in which the *Rousselette de Rheims*, after making shoots four to six feet in length in the early part of the season, and losing its leaves in July and August, has formed sessile fruit buds through the whole

extent of such branches, producing thereon a wreath of fruits in the following season. I do not mean to say the fruitlets would be without peduncles, but the clusters without spurs, which is their usual appendage.

Dwarfing fruit trees by propagating them upon small growing stocks, is only another method of stinting supplies of food. In this case we avoid the necessity of resorting to artificial means to diminish the system of roots, by making choice of stocks whose roots are naturally small, and it appears to me that the whole claim of this practice to favorable regard rests upon the following considerations only, and not upon any mysterious agency exerted by the stock upon the habits of the graft. 1st. It enables the amateur to cultivate a large number of varieties within a small compass. 2d. Fruits upon dwarf trees, like clusters of the grape upon branches from which the wood-producing force has been removed by amputation, have control of the circulation, and are for this reason larger and finer than upon trees where the wood growth is more active. 3d. Dwarfing simplifies fruit culture—the whole business of cultivation is to stimulate—the balance of power is at all times against wood growth. One must cultivate and manure, must thin and shorten-in. An ordinary fruit tree, when inserted upon a dwarf stock, is not unlike the fox in the fable, at the feast of the storks—its food has to be reached through such diminutive tubes ("such long, narrow-necked vessels") that there is no danger of growing to excess.

Neglected cultivation, although enumerated in the books as a means of inducing fruitfulness, does not deserve favor, and should always give place in the orchard culture of standards upon their own stocks to retarding the circulation, by bending down the branches. I believe, with Jeffries, that precocity should never be encouraged, but believe this method of hastening the bearing state to be attended with fewer evil consequences than almost any other. Suppose the top of a young tree to consist of a few straight switches; these, if bent to a horizontal position, will form fruit buds at the points in a year or two, whilst dormant or adventitious ends will put forth at the bases of such switches and refill the center with upright wood growth, the tree forming a head as rapidly and often with more sym-

metry than though the branches had not been bent.

Breaking the circuit of circulation is effected by ringing the branches. This ringing, when not so thorough as to produce the death of the parts cut off by the ring, not only induces fruitfulness, but very often adds brilliancy to the hues of colored fruits. Pinching or cutting off tender shoots and heading-back branches in full leaf are operations of a nature very similar to ringing—in many such cases the circuit of circulation is interrupted for a time, and the roots, after undergoing the labor of sending up the material which has formed the amputated branches, never can receive an equivalent, since by the act of amputation, the organs which should have digested this equivalent of food are destroyed. It is this debilitating tendency in the practice of stripping off the leaves and growing branches which renders the operation of shortening-in, in the month of August, conducive to fruitfulness, a result exactly opposite to that of the same operation if applied in February or March.

In conclusion, I may remark, that although in these numbers I may have failed to suggest anything new or useful to the readers of your very popular journal, still I think they will have been laid under obligations, even for my errors, if they shall induce the modest but well informed author of the "Fruit Garden" to redeem his pledge, and spread out in your columns the fruits of his extensive reading and valuable practical experience upon this more than interesting subject.

L. YOUNG.

LOUISVILLE, KY., 1852.

**OYSTER SHELLS FOR FRUIT TREES.**—A correspondent writes to the Germantown (Pa.) Telegraph as follows:

One of the most effectual applications I have ever made to fruit trees in an old and barren situation, is a compost in which finely broken oyster shells were the principal ingredient. The shells have generally a large per centage of saline matter attaching to them, in a fresh state, with some animal matter and much lime. By breaking them and mixing them with wood ashes, and spreading it thickly around old trees, an almost immediate and decided improvement will take place.





## The Vineyard.

### WINE SHOW AT HERMANN, MISSOURI.

#### Hermann Wine Fair,

For the award of the premiums offered by Mr. ALEXANDER KAYSER, of St. Louis, for the best Missouri wines of the vintage of 1851.

[REPORTED FOR THE HORTICULTURAL REVIEW.]

THE following members of the committee were present, viz :

Messrs. Frederick Schulenburg, William Glasgow, Jr., Wm. Warder, A. Boeckling, Dr. F. E. Baumgarten, Stephen Rice and Christopher Schiller, of St. Louis ; C. J. Wolf and Charles Firnstein, of Franklin county, and C. Umrath, F. Begersdorf, F. Magnus, C. D. Eitzen, E. Muhl, James Leszel, and J. C. Staffherst, of Hermann.

Frederick Schulenburg was selected as President, W. Glasgow, Jr., presiding Judge at the wine table, and Messrs. F. E. Baumgarten, Wm. Warder, A. Boeckling, and Stephen Rice, Secretaries.

Mr. Alexander Kayser being present, stated that he had received thirty-two different samples, composed of Catawba, Virginia Seedling, Lenoir and Isabella ; that he had stripped the bottles of all labels, and had designated them with the letters of the alphabet ; that the glasses used in tasting would be labeled to correspond with the bottles out of which they would be filled.

The premiums offered would be, for the best, forty dollars ; second, thirty dollars, third, twenty-five dollars ; fourth, twenty dollars ; and fifth, ten dollars.

The award was made as follows :

Four specimens were submitted at a time, out of which were selected one as best, and another as second, and the remaining two were rejected ; but any of the rejected sam-

ples might, at any time before the final award, be again compared and placed among either of these classes. The voting to be by ballot.

From the ten specimens so selected, the premiums were distributed by ballot, as follows :

H, best ; L, the second ; X, the third ; Y, the fourth, and J, the fifth.

Mr. Glasgow, having reported the result, and being now furnished by Mr. Kayser with the list of the competitors, it appeared that the first premium had been awarded to Mr. Adam Vallet, of Hermann ; the second to Mr. G. L. Busch, from Washington, Franklin county ; the third to Mr. Frederick Fricke, from near Hermann ; the fourth to Mr. Michael Poeschell, from near Hermann, and the fifth to Mr. Jacob Rommel, also from near Hermann.

The premiums were accordingly paid in the above proportion.

It further appeared from the list, that the other samples placed in the first class were from George Ackermann, Matthias Klink, Henry Rasche, and C. Kneisel, of Hermann, and F. Wilkins, of Franklin county.

The specimens of the second class belonged to Caspar Greis, John Siedler, G. Gronman, and Jacob Donyer, of Hermann, and Peter Weitznecker, of St. Louis.

On motion, it was

*Resolved*, That the committee think the specimen of wine made from the Virginia seedling, will, when more fully ripened, prove a valuable addition to the table.

*Resolved*, That our thanks are due to Dr.

Bock, of Waterloo, Illinois, for the very fine specimen of Catawba, of his own vintage, sent by him to this fair for our inspection. \*

On motion of Mr. C. Schiller, it was

*Resolved*, That we deem it expedient that the wine growers of the state of Missouri, Illinois and Iowa, should form one great Wine Growers' Association for the purpose of encouraging the culture of the grape, by annual premiums, to be awarded in turn in the three different states, and by useful publications.

On the motion of Mr. A. Kayser, it was

*Resolved*, That Wm. Glasgow, Jr., the presiding Judge of our testing committee, be requested to correspond with Hon. Wm. Carr Lane, the Governor of New Mexico, for the purpose of soliciting him to send to citizens of Missouri the best varieties of wine and table grapes produced in New Mexico.

On motion, it was

*Resolved*, That the thanks of the committee and the country are due to our friend Mr. Kayser, for the most liberal premiums which he has offered on the present and past occasions, and for the interest he has shown in the advancement of the culture of the grape.

*Resolved*, That the thanks of this committee are due, and are hereby tendered to the citizens of Hermann and its vicinity, and to the Committee of Arrangements, Messrs. Buckhart, Nagelin, Poeshel, Rommel and Baing, of Hermann, for the kindness and attention bestowed upon the Wine Committee, and the valuable assistance rendered them in the prosecution of their duties.

*Resolved*, That we request the various English and German papers of the state of Missouri, and the Western Horticultural Review, of Cincinnati, to publish the proceedings of this Fair, and that William Warder, one of our Secretaries, be desired to communicate them to the Cincinnati Wine Growers' Association.

The committee then adjourned to partake of an elegant cold collation, prepared by the wine growers of Hermann and vicinity.

FREDERICK SCHULENBURG, *President*.

WM. GLASGOW, JR., *P. J. of Table*.

F. E. BAUMGARTEN,  
WILLIAM WARDER,  
A. BECKLING,  
STEPHEN RICE,

*Secretaries.*

DEAR DOCTOR:—Above you will find the proceedings of the committee selected to determine upon the relative merits of the native wines in competition for the premiums offered by our fellow citizen, Alexander Kayser, Esq. It will be remembered that a few years ago, Mr. Kayser, with a liberality worthy of all praise, and emulation too, proposed to give several hundred dollars, to be distributed in prizes, for the best Missouri wines. The committee were called together upon the above day to distribute one hundred and twenty-five dollars among specimens of the vintage of 1851.

A more extended description of our trip, and what was done, may possibly interest some of your readers. Hermann, where the committee held its sitting, is situated on the south bank of the Missouri river, about one hundred and twenty miles above St. Louis. To reach there in time for the Convention, our delegation started on the packet Clendenin, on Thursday, the 26th of August. A few hours brought us to the mouth of the Missouri, twenty miles. This union of the waters does not strike the beholder at first with any feelings of grandeur. The Mississippi, broad and placid, comes sweeping from the north in the same course that is afterward pursued, and seems to be *the river*. At right angles, filled at low water with ugly snags and sand bars, and with the general appearance of an old and lost channel, opens the Missouri. As you look at it, you cannot conceive where a vessel is to find its way among that forest of sawyers and snags. In the meanwhile our good steamer plows onward clear across the mouth, and turning just where the muddy flood of the Missouri flows across and obliterates the clear black waters of the Mississippi, with one wheel in the Missouri flood, the other in the clear but black Mississippi, she searches her way.

It is here you first perceive the force and power of the Missouri. Not for an instant does the current of the Mississippi seem to retard its course, but right onward, straight across, almost to the Illinois shore itself, it goes boiling and surging, backing up the Mississippi upon itself. Here is the end of the placid waters of the Father of Waters—here it is lost, swallowed up, its whole character so changed that we know no longer the quiet and sweet waters which lingered as loth to leave the pleasant shores of its earlier course. From this point onward to the Gulf, rushes the turbid Missouri, with its snags and its sawyers, terrible as the devouring arms of a drunken kraken, its sand bars naked and bleached, its muddy and irresistible stream destroying everything in its course. Never have I passed this point and seen the commingling of the waters without being reminded of that forcible description and still more characteristic application by Lord Chatham, of the mingling of the Saone and the Rhone, and never without feeling a kind of horror creeping over me as I saw there two mighty rivers, so different in their character, approaching each other from such far distant points—the one smiling in beauty and loveliness, the other like the demon of destruction, blasting and destroying—the one lingering on its way, the other rushing with mighty swiftness and power toward its prey—and then witnessed that final obliteration and complete destruction as the one passes into the bosom of the other and is lost. Surely there is grandeur here, but it is the grandeur of desolation—a grandeur that speaks to the feelings and the intellect of the beholder.

Whilst engrossed with these thoughts, our good vessel, trembling under the pressure of steam necessary to stem the powerful current, brings the broad delta which

lies for miles between the two rivers, on to our right hand. Carefully we feel our way, for the channel is constantly changing. The quick ring of the bell, the hoarse shout to "back her," and but too often the rude shock against the bars, shows how uncertain is the depth of the water; whilst on either side the "sawyers," surging in their untiring swing, manifest but too plainly the dangers and difficulties which beset us. But I will no further horrify you with descriptions of dangers. It is sufficient to say that these are the characteristics for hundreds and hundreds of miles, and further, and that your correspondent had the good fortune to escape them all.

Some five miles above the mouth, in St. Louis county, on a high bluff that comes to the water's edge, is the old site of Bellefontaine, a United States post of some importance at one time, but now deserted on account of its insalubrity.

Fifteen miles further is the old town of St. Charles, which at one time rivaled the city of St. Louis, but is now a village of comparatively little importance.

Ten or fifteen miles more, still in St. Louis county, and distant from the city not more than thirty miles, and the bluff on the southern shore comes to the river, presenting the characteristic form of all the rocky bluffs which I have ever seen on either the Mississippi or Missouri, looking as if the hills had been cleft from the summit to the base by some vast power; the one half torn rudely away, scattered and lost; the other there in its native place, exposing the whole geological structure, and with the most evident line of the waters, a hundred feet or more above our highest floods.

This locality is chiefly interesting from a cave in which Lewis and Clarke are said to have encamped on their exploring expedition. The land back is very high and

broken. It is the "divide" between the waters of the Missouri and Meramac, some ten miles distant. Lying higher than any other part of St. Louis county, these rough hills will be most desirable for the cultivation of fruit. The Pacific railroad runs along the north bank of the latter stream, and will give an easy access to market.

From this point to Hermann, the river continues very uniformly the same—high bluffs, which indicate the general elevation of the country, on either side, distant some three or four miles from each other; the river now washing the base of one and then the other in its tortuous course; broad alluvial bottoms covered with cottonwoods and sycamores, etc., fertile, but liable to be overflowed by the spring floods, which are highest here in June, the period when the melted snows of the Rocky Mountains reach us.

We were most kindly met upon our landing at the wharf; and throughout our stay, nothing could be more flattering than the attention we everywhere received.

The committee met at the "Erholung," (recreation,) and commenced their duties at ten o'clock. Nothing could be fairer than the adjudication of the prizes. None of the committee could know anything of the wines which were before them. The awards seemed to give the greatest satisfaction, and, we were glad to find, fell to those who had been most careful in the treatment of their vines.

Two of the premiums were to persons who had been delayed in gathering their grapes from eight to ten days beyond the time they had contemplated—very conclusive that the wine was mostly made too soon.

We were very much gratified by the very high grade of the specimens; and though very agreeable to find so many that were

decidedly good, yet it certainly added very much to our difficulties in deciding which were the best.

From the decision, we adjourned to the residence of Mr. Rommel, where we were regaled by a most abundant cold collation.

The next morning we took an excursion of three miles up the river. Climbing the hills by a zigzag path to the top of the precipice, which here hangs over the river some two or three hundred feet high, we came out upon two beautifully cultivated vineyards—the vines kept in most admirable order, and the grapes not touched with the blight, but hanging in most abundant clusters. After enjoying the hearty cheer of Mr. Fricke, and tasting his delightful premium wine, we climbed some two or three hundred feet higher in search of an appetite we had lost, and to see the vines of friend Wilhelm Poeschels. The grapes at this high point were the ripest we had yet found, and also in fine condition. The magnificent view repaid us for our scramble, and before we got to Mr. Michael Poeschel's, we found we were quite ready to enjoy, with a hearty zest, his abundant cheer. These three vineyards have a southern exposure, which is very much preferred here. The soil, as throughout the whole neighborhood, is a strong clay mixed with sand.

Here we must not forget to mention the fine seedling Catawba that Michael Poeschel had succeeded in raising; the berries three times the size of the ordinary kind.—The fruit was not ripe, and we could not determine its quality, but were assured that it was at least a very fine table grape. Take care, or Missouri may carry off Mr. Longworth's premium.

Hermann was settled some fourteen years ago by a company of Germans. The country is very much broken, and the soil very poor. The many hardships and the scanti-

ness of the crops discouraged the early settlers, and many of them left. Finding that corn, wheat and tobacco yielded such poor returns, and hoping from the success which attended the grapes planted in their gardens, that wine might be profitably made, a company sent in 1845 to Cincinnati for 24,000 cuttings of the Catawba. These were set out in vineyards the next year.—In 1847, Mr. Poeschel made 24 gallons of wine. In 1848, the vines bore a remarkably fine crop. This gave an impetus to the growth of the vine, and though no crop since then has come up to that, yet all hope for better times.

A calculation of the quantity of land in grape culture was made this summer, which showed the large amount of 473 acres thus employed near Hermann, more than half of which is in bearing. If to this be added some twenty or thirty acres near Washington, Franklin county, we shall find that Missouri will soon come up to, if not surpass, states which are now thought so far in advance of us in this most interesting culture. With the present certainty of profitable investment in wine making, the citizens of Hermann no longer complain of their rough hills, but see in them the source of wealth, and health and enjoyment. Old citizens are returning, and now the village contains some twelve hundred inhabitants.

But it is time for our return. A white cloud of steam in the distance hastens us to the shore. A kind farewell is spoken—the bell rings—the plank is drawn—a wave of the hat, and we are off for home, thankful if only for a few days we could enjoy so pleasantly a relief from business cares; the only drawback, dear Doctor, being that you were not of our number. Adieu.

Another letter states that “most of the wine was very fine, and almost all good, the

color of the samples much richer than that of the Cincinnati wines, though they denied that they left the must stand on the lees. This is no objection to me. For still wines, in fact I admire it; but it may injure it for ‘sparkling Catawba.’

“Two of the awards were made to ‘Low Dutch,’ who had never been acquainted with the raising of grapes before they came to this country. This caused a great deal of amusement, and confirms your experience in Cincinnati, that it is easier for our adopted citizens to learn than to unlearn.

“At Michael Poeschel’s we found a seedling Catawba that promises to be of great value: the bunches full, well rounded, and compact; the berries three times the size of the Catawba. Does Mr. Longworth’s offer of a premium extend to Missouri?—By the way, Mr. Zimmerman was at Hermann a couple of weeks ago, and purchased some twenty-three barrels of wine for Longworth and Zimmerman, and will return in time for the vintage, to continue his purchases.

“I suppose that the number of acres will astonish you as much as it did me.—I received the statement from Mr. Charles Eitzen, a very intelligent man, who says they made a list, some three months ago, of the vineyards of the county, and that this was the result.”

#### Bleeding of Trees from Pruning.

ONCE upon a time I set two men to prune up a stock of silver maples. The leaves had but lately fallen. After pruning for a time, I was informed that the trees bled a little; I thought fit to have the operation stopped. In the middle of winter, when I thought the wood would certainly be ripe, I had quite a number more pruned—these bled much; I mentioned the fact to an older and wiser head than mine. His reply was “Oh, it won’t hurt them any, they bleed any time.” Through pressure of work, some of these maples were left unpruned till the

leaves were nearly bursting; then they did bleed—here was a glorious opportunity to observe the effects of bleeding. I watched them frequently after, but I never saw the *slightest* difference in their appearance or health; I pursued the subject further. On taking charge of an establishment I found a trellis covered with unpruned Isabella vines; it was in the middle of April, and the eyes were bursting. They looked so untidy that I determined to prune them, bleed or not; I did not so firmly believe in the injurious effects of bleeding then as I had formerly done—I resolved to decide it then, and forever. I pruned half the trellis of vines, and let them bleed as they might; the other half I left unpruned, but made them look as tidy as I could. They proved equal ultimately in all respects; the pruning had not injured them—the only advantage gained was the improved appearance I desired. Well, sir, I had gained my point. I had proved that bleeding was not injurious. I next endeavored to understand why it was not so, and I found ample reason; I watched the process of bleeding, and found that it ceased *immediately* on the opening of the blossoms. On examining the wood I found that the *flow* seemed to proceed through the pores of the wood, rather than through the bark or the alburnum; and upon collecting some of the fluid, I found, both in the vine and the maple, that it tasted *nearly* like water, quite *different* from the taste of the alburnum or inner bark. I watched also the growth of the maple further—I found that in trees of the same age, growing side by side, those bled most which had blossom buds, and that the bleeding *ceased on the expansion* of these buds—those which had no blossom buds were irregular in the time when their ceasing to bleed arrived.

From these facts I conclude that the moisture given out in bleeding was very raw, crude sap, kept in readiness by the plant to supply the great extra evaporation which must naturally take place on the bursting of the buds. It seemed, firstly, that some source to supply the sudden evaporation was necessary; secondly, the flavor of the sap showed that it could be of very little service except to supply that evaporation, as, had it been elaborated in the leaves, it would have tasted like the inner bark; and thirdly, the experiment on the grape and

maple proved, by their being uninjured, that the buds left on the trees after pruning did obtain from the stock that was left, sufficient for all their evaporating purposes.

*Thos. Meehan, in Philad. Florist.*

#### New Grapes.

*To the Grape Growers' Association:*

GENTLEMEN:—I HAVE heretofore expressed a wish, that our vine growers would raise seedlings from our best native grapes. I send you numerous specimens from the seed of the Catawba, and one or two from other grapes. They were sent to me from Hermann, Missouri, and the names of the persons who raised them are attached. No accurate estimate of their quality can now be made, as they came packed in cotton, in a tight box. But the extra size of them will show how variant the seedlings will be from the parent vine.

I have one seedling from the Catawba that bears a few berries this season, that I expect to be superior to the Catawba as a wine grape. This is a strong assertion, as I deem the Catawba superior as a wine grape to any foreign variety. There were several more seedling Catawbas in the box, too far decayed for exhibition.

I also send you some grapes from the garden of my sister in New Jersey. Her land is a poor, stiff soil. Yet the Missouri grape there makes shoots three times the length in a season that it does here, and I have never seen a branch in this vicinity two-thirds the size of the sample I send. There is among the grapes a bunch from a seedling of the Malaga grape. The parent must be a poor table grape, inferior to our Isabella. I regret to say that the Missouri grape has received as little notice in New Jersey, as the most celebrated of German wine grapes, the Traminer, has done. It has been cultivated on one farm for sixty years, and proved perfectly hardy, and might have met a

similar fate in our backwoods, as it has been cultivated on a farm near Delaware, in our state, for twelve years. Mr. Carnes saw it there two years since, and made its superior qualities as a table grape known. Its quality as a wine grape had not been tested, though called a foreign wine grape. Its quality as a wine grape here will soon be thoroughly tested; for some of our German vine-dressers, learning its hardy character, have given orders for some 30,000 roots from Germany, where they can be bought for \$15 or \$20 per thousand.

Yours, respectfully,

N. LONGWORTH.

P. S. In the Catawba seedling No. 10, I believe you will notice in its aroma, the disposition to go back to its original ancestor, the fox grape.

Mr. Longworth's remarks respecting the Missouri and the Traminer, which have been successfully cultivated for so many years, without spreading from their original location, or attracting the attention of cultivators, is only another evidence of the advantages to be derived from our Horticultural and Pomological societies, and of the deep indebtedness we are under to such spirited individuals as Mr. L., who is constantly engaged in the investigation of new fruits, in too many of which, unfortunately, he has been sadly deceived.

The following is the list of the very interesting collection referred to by Mr. Longworth. As he says, they were not in a condition to judge of their quality fairly, and several other varieties were entirely spoiled. We hope upon another occasion to see the same varieties under more favorable circumstances, as the mere fragments indicate that they belong to the finest collection of seedling grapes it has been our good fortune to examine.

*Grapes*,—Presented by N. Longworth, brought from Hermann, Mo.—Ficke's Catawba seedling, No 23; Ficke's Catawba, No. 24, dark red, round, medium, compact bunch; Ficke's Catawba, No. 11, his best; Ficke's Catawba, No. 14, red; Ficke's Catawba, No. 18, red, rather large, round; Ficke's Catawba, No. 19, black, small, compact; Ficke's Catawba, No. 12, white, large, soft pulp; Ficke's Catawba, No. 10, red, very large, foxy, hard pulp, tough skin; Ficke's Catawba, No. 20, red, compact, round berry; Ficke's Catawba, No. 23, dark red, medium size; S. Rommel's Halifax seedling, black, compact bunch, prolific, five bunches on branch; Poeschell's Catawba, very fine, close pruning; "Black Catawba;" Isabella, unripe; Cape, (from Ficke's;) Norton's Virginia.

#### Letters from Fournier.

*To the Members of the Horticultural Society :*

GENTLEMEN:—Many persons have pretended that the wine of this year would be even superior to that of the last year; but experience proves that its quality will be much inferior—whereas, if the vignerons had made their wine according to the method which I prescribed last year to Mr. Longworth, and which has been put in practice, the wine would be much superior to what it will be. Here is the proof. I requested a vine-dresser, named John Clement, to put into one cask the first four-fifths of the juice of the grape, and the last fifth into another cask—the first four-fifths weighed 79 degrees, the last fifth but 63. Not only was there this great difference in the weight, but this latter fifth contained a very large quantity of acid generated by the stem of the grape, which has not, as on last year, attained its complete maturity. I have precipitated this acid, and the juice weighs 80 degrees. The four-fifths of the wine was but little colored, and possessed an exquisite sugar and flavor, free from acid. This proves that with care it would be possible to make a much superior wine, if one would follow the process used in Champagne. On the other hand, it will prove that it is not the most vinous

wines which make the best sparkling wine. I would be happy if these simple observations would decide some person among you to try the plan proposed, as I can predict for them, in advance, a good result. Please excuse, gentlemen, the liberty I take, and accept my respectful compliments.

FOURNIER.

GENTLEMEN:—Mr. Longworth has propounded to me the following questions, with a request that I should reply to them in a letter addressed to you. "These questions are put to me," says he, "because the Committee of the Horticultural Society differ in opinion with the Wine Association." And although Mr. Longworth does me too much honor, and attributes to me too great capacity, I nevertheless reply according to my weak understanding, which should not be for you a verdict or maxim:

Question—1st. Does the aroma and flavor of the wine exist in the skin of the berry of the grape?

2d. The grape being perfectly ripe, will the wine contain the aroma and flavor if pressed without mashing?

3d. Is it necessary that the grape be mashed before pressing?

Answer—1st. The skin of the grape berry produces neither the aroma nor the flavor, contributing only the coloring matter.

2d. It is not necessary to mash the grape before pressing in order to make white wine; that the coloring matter has no fixedness except when the wine has fermented on the skin.

3. It is preferable, in order to make white wines, to press the grape without mashing, inasmuch as the mashing produces a coloring matter, and that this color always tends to diminish, and produces a precipitate (or sediment) in the wine. The flavor (or perfume) of the wine is produced by an oil contained in the interior of the berry of the grape, which has never been isolated. I have already made many experiments on this point, without having been able, as yet, to obtain a satisfactory result. I can, therefore, only reason comparatively.

Here, gentlemen, are two positive facts, taken from the experience of others. Reiberg, a wine-dresser of Basktule, made three qualities of wine with one single pressing.

1st. The juice weighed 11 degrees 1-5, fine bouquet and aroma.

2d. The juice weighed 10 degrees 4-5, very little bouquet and aroma.

3d. The juice weighed 10 degrees 1-5, without bouquet and very acid.

Mr. Deininger made two qualities of wine with one pressing.

1st. Pressing thirty-six gallons, weighed 80 degrees, with a very fine Catawba flavor.

2d. Pressing five gallons, weighed 60 degrees, without aroma and very acid.

These latter wines have been tasted by Mr. Longworth, who was surprised at the difference.

Mr. Longworth asks me further, Is there a difference for vinous fermentation between a vault, a cellar, and a warm place?

Vinous fermentation is produced in all places, where the temperature is not lower than 5° Centigrade above Zero, nor above 70° Centigrade. The best fermentation is that which takes place in a temperature of 15° to 25° Centigrade. Below 15° the vinous fermentation is often not completed until the end of five or six months. Above 25° it becomes too lively and agitated, a great part of the vinous quality disengaging itself from the wine.

It is not necessary for me to enlarge on this point, it having been elaborately treated of by Gay Lussac, Chaptal, Chenard, and many other distinguished chemists, in a manner that can leave no doubts on the subject.

Pardon me this long epistle, and deign to receive, gentlemen, my respectful compliments.

FOURNIER.

#### Dr. Valk's Letter

TO THE AMERICAN POMOLOGICAL SOCIETY'S COMMITTEE.

Gentlemen:—As my engagements do not permit me to visit Philadelphia during the sitting of the present congress, I send for your examination by the hands of my friend, Mr. Samuel Parsons, several bunches of the fruit from my *seedling grape*. I submit them to your inspection and impartial judgment, and furnish you with a brief history of their origin. You will find on page 444, volume 6, of the late Mr. Downing's Horticulturist, some remarks by myself on the present subject, and his notice of a specimen of the fruit sent him last year.

Directing your attention to those remarks,



it becomes only necessary to say here, that, *with all possible precaution*, a vine of the *Black Hamburg* grape was in 1845 fertilized with the pollen of the *Isabella*. From the seed there came fourteen plants, and these were kept in pots for two years, at the end of which time, there remained but two alive: for, from being absent from home, the young plants had been very much neglected. In the spring of 1847, both these seedlings were planted at the north end of my garden, one having an eastern exposure, the other a western. The soil was not in any way prepared for their reception, nor have they received the least attention by cultivation. On the contrary, I have suffered them to grow wild, and to take their chances in summer and winter, and in all kinds of weather, without any sort of care or looking after. In 1850, they fruited for the first time, and had then been exposed to the frosts and snows of four winters. Before I could give it a thought, the poultry ate all the fruit, and much to my regret, for it was of good size and appearance. In 1851, they bore still more fruit, but during my absence, in September last, all but one bunch was stolen of the best fruit, the thieves only leaving a few bunches on one of the vines, because, I suppose, they were a little mildewed. This one bunch I sent to Mr. Downing, and he spoke of it thus:—

“At first sight, the bunch resembles that of the *Isabella*, the grapes being hung somewhat loosely upon it. But the berries are round—blackier than the *Isabella*, and totally distinct in flavor from our native grapes, resembling the dark colored foreign grapes. There can be no doubt that this is the first genuine cross between the foreign grapes, and our natives, and if the cross

realizes the promise of this single bunch—evidently a poor sample of the product of the vine—this new seedling of Dr. Valk's will soon become widely sought after.”—*Horticulturist*, October, 1851, page 445.

Last fall I removed the vine having a western aspect, to the front of my house, (facing south-east) and had to cut it back severely; consequently this year it has not fruited. The other vine has upon it eighteen bunches, and it is from this I cut the fruit now transmitted. It is, as you will perceive, in a purely natural state, for I have purposely left it to grow as it would. The vine has not been manured, or the branches thinned; consequently, they do not look as well as I might have them; but I chose to submit them just as they are, and you will judge them accordingly.

For five years have these plants stood unprotected, and last winter gave them a trial as to the quality of hardiness. The vines grow strong, ripen their wood well, and their foliage is “very deeply serrated.” Of their true worth, I give now no opinion. They are submitted to the congress for approval or condemnation, as shall be deemed most proper. You will of course take a just view of the circumstances I have narrated, and announce your verdict. Let it be what it will, I shall have the satisfaction of knowing that I have done all I could to improve a valuable and delicious fruit.

I remain, gentlemen,

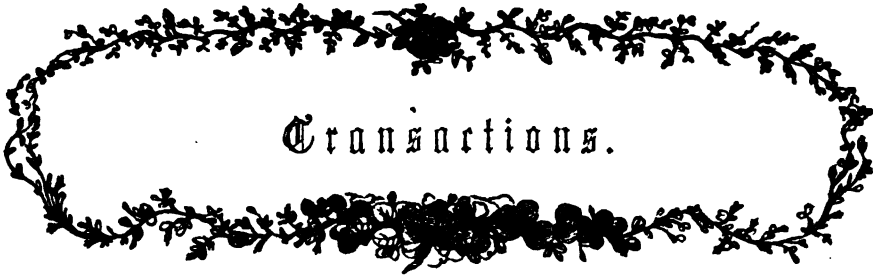
Your obedient servant,

WILLIAM W. VALK, M. D.

FLUSHING, L. I., September 12th, 1852.

N. B. The fruit is not fully ripe. Its time of ripening is about 1st October. I have to send it as it is.





## THE CINCINNATI HORTICULTURAL SOCIETY.

### AUTUMNAL FESTIVAL.

THIS great jubilee, which had been anticipated with so much anxiety and for the excellence of which great efforts had been made by some of the most energetic of the members of our society, came along in due time, and at last surprised the most sanguine. The great hall was opened on Monday and Tuesday, for the reception of contributions; which kept flowing in, quite encouragingly, until noon of Wednesday, the 29th, by which time the tables were groaning under the weight of plants and fruits of every kind. Of the display, it may be said, in general terms, that it exceeded all previous efforts of our members, and does them great credit. The plants were generally very good, and great care had been bestowed upon their preparation for this exhibition. Indeed they bore a much better character, in this respect, than those which are generally exhibited in other societies. And as to the fruits, notwithstanding the scarcity of peaches, the exhibition embraced continuous tables that seemed to have no end, covered with beautiful large and well known specimens that were refreshing to behold.

The vegetables were supplied in great numbers and variety, filling an entire room by themselves; and it was observed with pleasure, that more care and judgment had been exercised in their preparation and selection than heretofore, indicating an improvement, in the taste and knowledge of the producers, that would have been gratifying to Prof. J. J. Mapes himself—and he is not only a successful grower of good vegetables, but a judge of their merits.

Very possibly, he might have criticised the extra size and necessary coarseness of some of the specimens; but others might have challenged his admiration.

The decorations were not so numerous as upon former occasions; but they were in very good taste, and attracted much admiration. The pagoda which occupied the center of the room, mounting up three stories in height, was a very graceful structure, of fairy lightness and grace, doing great credit to the taste and perseverance of Mr. Heaver, its architect, who had it beautifully decorated with pendent bouquets of lovely flowers hanging beautifully from every point of the roof. This was a much better arrangement than sprinkling the whole over with flowers, as has been done by others.

It will be impossible to describe all the excellent properties of the various contributions; and yet some were worthy of especial note, and the others will not feel slighted by having their neighbors' articles praised, when it is apparent to all that they were worthy. The reader is referred to the list of entries published below, for a correct and entire account of the articles exhibited.

Beginning with the fruit tables, there is a very fine display of apples, from W. E. Mears, of Mount Washington; many of which are of very fine growth, and others are interesting because of their being natives of the country. Some of these promise well, and shall be reported on at future meetings, as they ripen. R. Buchanan and T. V. Peticolas, each made a very fine show of this fruit, numerous varieties, and

among them many that attracted attention, and have been set aside for future observation. These three tables appeared to vie with each other for the prize. Near them was the collection from Spring Garden, presented without name, and merely for display, in the absence of the worthy proprietor.—They possessed the merit of rarity, nevertheless, and furnished a fine opportunity to the pomologists, who owe much to Mr. Ernst for his persevering industry in collecting very many of the Western fruits that would soon pass into oblivion, were it not for some such determined collector, who will test their merits, and report their results. No doubt he has already met with many disappointments in the fruits that have been yielded by grafts which some good old farmer has recommended to him as the very best in the world. But what of that? he will also be rewarded by rescuing and redeeming from oblivion some which are really good. Success to his efforts!

One of the prettiest and most extensive displays, was that of Melancthon S. Wade, Jr. His Alexanders were very fine, and brought a delicate bloom upon their brilliant cheeks, that reminded one of Russian snow storms trying to conceal their beauty. Many other sorts, from imported trees, possess the merit of rarity among us, as well as other good qualities.

The table of Wm. Orange exhibited, as it has heretofore done, some of the finest specimens that any one could wish to see; but he would not enter the lists in competition for the prizes. Messrs. S. M. Carter, F. U. Stokes, Jno. Frazer, Wm. Heaver, Jno. E. Mottier, George Hill, P. Outcalt, I. C. Ferris, S. Mosher, and H. F. Sedam, presented smaller collections that would have done credit to any pomological congress, and the only regret was, that a selection from them could not have been exhibited at the recent meeting in Philadelphia, to show what the West can produce.

The mixed fruits of G. Sleath, and M. McWilliams, deserved and attracted particular notice from all passers, on account of their beauty, profusion, and tasteful arrangement, in which department the latter always excels, and some of his pears were unusually fine.

The exhibition of pears was highly creditable to the cultivators of this delicious

fruit, and shows that if we can be spared the blight until our trees reach their maturity, we may vie with eastern cities. Mr. Ernst's garden contributed many varieties; the table of W. Resor, some of the very best; Wm. Heaver, quite an assortment; Wm. Orange, Mrs. Jno. Saunders, Jos. Longworth, H. F. Sedam, P. Outcalt, G. Hill, and others, choice lots. But the prettiest collection was from W. S. Hatch, and each pear on every plate looked as though it had been nursed from the fall of the blossom.

We were again favored with a large and handsome collection of fruits from our eastern friends. A box was received from Thorp, Smith, Hanchett & Co., of the Syracuse nurseries, containing the apples and pears of the season, which covered a large table, and attracted much admiration for their beauty of coloring, and for their rarity. They afforded a fine opportunity to study some new kinds which have not yet fruited here, and were also useful for comparison with our own. This present has not been thrown away on our society.

But what shall be said of the grapes—the crowning wreath of Cincinnati at this season of the year! The bunches of foreign varieties, from the vineyard of W. Resor, exceeded all that I have seen elsewhere, not even excepting the prize bunches of Mr. Suydam, of Geneva, New York. The display of the same sorts, from W. Heaver, was very rich and attractive, notwithstanding the injury inflicted by the severe hail-storm of the spring, which destroyed the glass, and injured the young shoots. Mr. Longworth's display was not so varied as usual, because they had been ripened earlier, and were past; but his collection of hardy varieties was exceedingly extensive, and possessed great interest. They will be noted more in detail by a committee who had them in charge, and who visited the grounds, to study them on the vines.

Among the beautiful collections of hardy grapes, those from Sebastian Rintz presented some of the finest bunches of Catawba, Herbemont, and Guignard, ever exhibited upon our tables. The display of R. Buchanan was very rich; those from Jno. E. Mottier attracted much attention from their beauty and handsome arrangement; those from H. Duhme were very fine; and the Isabellas of N. Hastings were, as usual,

among the best. Some of those in the collection of mixed fruits would have appeared to advantage in competition for the best specimens. Many of our connoisseurs, on testing the well ripened Catawba with some of the most popular foreign varieties, give the former the decided preference. The specimens presented by L. Rehfuß, to show the influence of special manures in producing a better maturity of the fruit, will be noted in the report of the wine committee to whom they were referred.

In green-house plants, this exhibition was much better than could have been anticipated. S. S. Jackson's moving prevented him from presenting anything. Most of the amateurs withheld their valuable contributions, which have heretofore added greatly to the eclat of the displays. But the gardeners exerted themselves the more, and produced a most beautiful result, in handsome, healthy, well-grown specimen plants, of which most were in fine bloom.

Some of the vegetables are worthy of being noticed more in detail; but we shall be obliged to refer to the committee, who, having examined everything critically, will be able to do so much better. As a sort of extra, however, and a new feature in our displays, which is heartily welcomed, the exhibition of grains must be mentioned.—We have always encouraged the display of the rich ears of golden maize, in all its varieties, and have ever boasted of the gigantic cornstalks, which are often paraded with great effect as evidence of the fertility of the soil; but here were grains of another class, from our agricultural amateur members—barley, and rye, and wheat, in beautiful sheaves, constituted rich ornaments to the arena. Among these, special notice should be taken of the splendid ears and beautiful grain, grown by C. Wardall, of Cheviot. The variety is called the White Purkey Wheat, and its weight, as stated below, at 72 pounds per bushel, is remarkable. The huge sheaves, tastefully tied with large bands of straw, presented a rich display of heavy ears, and were universally admired. It has often been a matter of surprise, that our county agricultural fairs should present so meager a display of the raw products, grains, and grasses, which would there be peculiarly appropriate and valuable to the farmer, for comparison—

while in our horticultural displays they constitute merely a beautiful ornamental decoration. Let the example set by our society, and by the extensive collection of grains and grass seeds, at the New York State Fair, be noted and acted on by others.

#### PLATE PRESENTATION.

One of the prettiest incidents connected with this exhibition, was the presentation of plate by the lady members of the society, to certain individuals they were pleased to think deserving of their especial regard. The surprise to the happy recipients was delightful, as the whole affair, so far as concerned each individual, was admirably concealed from each, so far at least as concerned himself.

The recipients were the worthy and excellent President, Dr. S. Mosher, the venerable Ex-secretary, J. P. Foote, who has long served the society in the most satisfactory manner, the present incumbent of that laborious office and the untiring actuary, Wm. Cox, Sr. The former received a beautiful silver salver, The Ex-secretary, two richly bound copies of the "Common Prayer," for himself and wife. To the actuary, who recently entered upon the state of matrimony, a set of silver spoons; and to the secretary, a beautiful silver pitcher, upon which was the following inscription:

#### PRESENTED TO

J. A. WARDER, M. D.,

AS A TESTIMONIAL OF ESTEEM,

*By the Ladies of the Horticultural Society,*

September 30th, 1852.

Doctor MOSHER, in bestowing the gifts, made the following remarks:

Ladies and Gentlemen,—I have been called upon by a number of ladies, most ardently devoted to the cause of horticultural improvement and the interests of the Society, whose labors and intelligence have, on this occasion, spread before you, in such bounteous profusion, the varied and tempting luxuries which you see here displayed, to perform a most pleasing duty. It is to present a most worthy compliment—the reward of personal merit and esteem—to those who have devoted much of their time, their talents, and their labors, in support of horticultural science, and the best interests of this society.

The compliment, I have no doubt, will be

the more highly appreciated as coming from the fair hands that have so tastefully blended the rose and the eglantine—the beautiful charms of Flora, in fashioning so many beautiful ornaments which decorate this spacious hall.

Ladies and gentlemen, it is no empty compliment that I have the honor of dispensing this evening, in behalf of these fair donors—

To John P. Foote, for his long and devoted labors while filling several important offices in the Society, two embellished volumes.

To William Cox, for his faithful discharge of many onerous duties in the Society, an elegant and substantial set of silver spoons.

To Dr. John A. Warder, for his unwearied exertions in behalf of the Society, and of the cause of horticulture and rural taste,—(an empty compliment? no)—but a bona fide substantial silver pitcher, of chaste and elegant workmanship.

Appropriate replies were made by the recipients of the presents. After which, Dr. WARDER, on behalf of the ladies, presented to the President a splendid silver salver, bearing the following inscription:

PRESENTED TO

S. MOSHER, M. D.,

AS A TESTIMONIAL OF RESPECT,

*By the Ladies of the Horticultural Society,*  
September 30th, 1852.

When the President responded in a neat and touching acknowledgment, in which the effect of the agreeable surprise was no less apparent than it had been in the other parties.

On Friday evening, E. V. Peticolas entertained the audience with a neat and appropriate address.

#### EXHIBITED.

##### FRUITS.

W. Orange—Apples; Roxbury Russet, Rhode Island Greening, Vandervere, Rambo, Gloria Mundi, Rawle's Janet, Bellefleurs Yellow and Orange, Fall Pippin, Small Speck, Golden Russet, Seedling, Cottage Red, Pearmain, Newtown Pippin, a bough of Rawle's Janet. Quinces, two var.

M. McWilliams—Apples; Golden Sweet, Golden Pippin, White ditto, Newtown ditto, Bellefleur, Hawthornden, Fameuse, Vander-

vere, Romanite, Rhode Island Greening, Puriam Russet, Siberian Crab, three Seedlings. Quinces; Apple, Orange, and Pear varieties. Pears; Bartlett, Belle de Flanders, Butter, Onondaga, Louise Bonne de Jersey, Seckel, Clion, Fall Bergamot, Winter Sugar, and Delhi. Grapes; Isabella, Catawba, Herbemont, and Cape.

P. S. Bush—Apples; two plates of Pound Pippin, Winslow, Seek-no-further, and Fall Queen. One plate of Quinces.

W. S. Hatch—Pears; Napoleon, Butter, Heathcote, Seckel, Red Cheek Bergamot, Princess of Orange, Frederick of Wurtemberg, Dix, Green Sugar.

H. M. Ernst—Splendid Quinces, and Specimens of very large Pears.

C. F. Schneicke—Fine Catawba grapes.

J. W. Shays, Mount Auburn—Apples; Alexander, [?] Ortle, Putnam Russet, Bellefleur, Vandervere Pippin, Fall ditto, and four unknown. Pound Pears and Quinces.

F. Ball—Apples; Bellefleur, Newtown Pippin, Newtown Spitzenberg or Oxeye, Pennock, Golden Russet, Vandervere Pippin, Fall ditto. Also, Quinces.

Jas. Dinsmore—Apples; Putnam Russet, Golden ditto, and two others not known. Osage Orange, full grown fruit.

S. M. Carter—Apples; Rhode Island Greening, Roxbury Russet, Fall Pippin, Neiceley's Greening, Green Newtown Pippin, "Lumpstem," Maiden's Blush, Vandervere or Newtown Spitzenberg. Quinces, one peck.

Dr. Shaler—Pears; Burgomeister or Clion, and Cushing.

F. U. Stokes—Apples; Vandervere, Milam, Black, Fall Pippin, Putnam Russet, Wild Crab, Vandervere Pippin, Bellefleur, Maiden's Blush, Kaighn's Spitzenberg, and seven varieties unknown. Large Pears, Quinces, Citron Melons.

Jno. Frazer—Apples; Kaighn's Spitzenberg, Rambo, Maiden's Blush, Doctor [?] Holland Pippin [?] Romanite, Fall Pippin, Newtown ditto, Campfield, Putnam Russet, Porter, Bellefleur, Greening, Dwarf, Frazer's Greening, Brabant Bellefleur, White ditto, Baldwin, English Sweeting, Minister.

Jno. D. Park—Gloria Mundi Apple.

W. Resor—Pears; Easter Beurre, Echaserie, Duchesse d'Angouleme, Swan's Egg, Frederick of Wurtemberg, Napoleon, Pound,

White Doyenne, Marie Louise, Winter Bon Chretien.

W. Heaver—Apples; Baldwin, Minister, Red Chandler, Red Gilliflower, Marygold, Roxbury Russet, Vandervere, Seedling, Monstrous Bellefleur. Pears; Napoleon, Prince du Printemps, Seckel, Passe Colmar, Beurre Diel, Easter Beurre. Grapes, hardy, for best display; Catawba, Isabella, and White Catawba. Grapes, foreign, for display in variety; Black Hamburg, Black Prince, Black Muscat, Fondante Verte, West St. Peters, White Frontignan, Grizzly Frontignan, Royal Muscadine, Scharge's Henling, La Palestine, White Sweetwater: Barbaris Dulcis: Figs; German Medlar. Also, a large collection of fruits not reported by name, for want of time.

M. Kelly—A display of Apples; Newtown Spitzenberg, Vandervere or Oxeye.

John E. Mottier—Apples; Alexander, Bellefleur, Black, Campfield, Chandler, Esopus Spitzenberg, Golden Russet, Golden Pippin, Holland Pippin, Rawle's Janet, Jonathan, Newtown Pippin, Newtown Spitzenberg, Putnam Russet, Rambo, Vandervere Pippin, Wine Apple. Grapes; Catawba, Isabella, Cape, Missouri, Minor's Seedling, Mottier's Seedling.

Sebastian Rintz—A fine display of Grapes, including Catawba, Isabella, Herbemont, Guignard, and Cape. Apples; Ortle, and Newtown Pippin.

Geo. Hill—Three varieties Pears. Quinces. Apples; Baldwin, Vandervere, Rawle's Janet, Golden Russet, Putnam Russet, Bellefleur, Rhode Island Greening, Gloria Mundi, Newtown Pippin.

R. Buchanan—Apples; Alexander, Graevenstein, Fall Pippin, Gloria Mundi, Waxen, Golden Russet, Green Newtown Pippin, Yellow Newtown ditto, White Bellefleur, Winter Pearmain, Willow Leaf, Monstrous Pippin, Blenheim ditto, Wine Apple, Maiden's Blush, Gatch, Ernst's Sweet, (Tallman's?) Scholl's Red Winter, White Pippin, American Pippin, Baldwin, Lansingburgh, Romanite, Pennock, Virginia Greening, Porter, Green Pippin, Lady Apple, Delight, Vandervere, Kaighn's Spitzenberg, Rawle's Janet, Red Sweet Pearmain, Wine Sap, Campfield, French Everlasting, Chandler, Harrison, Red Bellefleur, Grafton Winter Sweeting, English Codling, Pryor's Red, Winter Pearmain, Summer Pippin, Minis-

ter, Early Bough, Carolina Sweeting, Golden Spice, Rhode Island Greening, Yellow Siberian Crab, Danver's Winter Sweeting, and ten unknown varieties. Grapes; Catawba, Isabella, Cape, Venango, Black Sweet. Quinces; Orange or Apple, Portugal, Lemon, and Pear?

R. B. Chapman—A plate of Seedling Peaches.

H. F. Sedam—A beautiful collection of Apples and Pears.

W. E. Mears—Apples; Harrison, Kentucky Red Streak, Queen of Summer, Cayuga (Peck's Pleasant), Butter, French Pippin, Ribstone ditto, Michael Henry ditto, American ditto, Miami Red, Delight, Ashland, Red Pearmain, Milam, Smith's Cider, Stroman, Gate, Lansingburgh, White Bellefleur, Virginia Greening, Ladies' Favorite, Sheep Nose, Newtown Pippin, Yellow ditto, Morgan, Morgan's Seedling, Queen Anne's Favorite, Alexander, Pumpkin Sweet, Yellow Bellefleur, Kaighn's Spitzenberg, Baldwin, Rawle's Janet, Pryor's Red, Roxbury Russet, Golden ditto, Willow Leaf, Fall Pippin, Pennock, Roman Stem, Fall Queen, and unknown.

P. Outcalt—An assortment of Pears and Apples.

Wm. Cogswell—Some choice Apples.

T. V. Peticolas—Apples; Baldwin, Yellow Bellefleur, White ditto, Black Apple, Broadwell, Brabant Bellefleur, Black Gilliflower, Cheese, Campfield, English Russet, Golden ditto, Fall Winesap, Edgar's Sweet, Fall Pippin, Fallwater, Golden Ball, Harrison Apple, Hubbardston None-such, Honey Russet, Kaighn's Spitzenberg, Lansingburgh, London Winter Sweet Pippin, Lady Apple, Maiden's Blush, Mela Carla, Mammoth Sweet Pippin, Michael Henry ditto, Newtown Spitzenberg, Pennock, Putnam Russet, Porter, Pryor's Red, Priestly, Ramsdell's Red Pumpkin Sweet, Romanite, Robertson, Rambo, Rome Beauty, Rhode Island Greening, Rich Pippin, Sheepnose, Titus Pippin, Talman's Sweet, Vandervere Pippin, Virginia Green, White Pearmain, White Pippin, Winesap, Siberian Crab, Seedling ditto, Stroat, White unknown, Willow Leaf, White Seck-no-further, Weaver's Red Winter, Waxen or Gate, Winter Pearmain, name unknown, Basis Gate, White unknown, Red unknown, L. Snale Black, Sweet Winter unknown, Striped unknown.

Pears; Bartlett, B. Capiaumont, B. Diel, B. Easter, Bon Chretien Fondante, B. Ar-  
emberg, Bleeker's Meadow, B. d'Amaulis,  
B. Bosc, Colmar, Dix, Echasserie, Flemish  
Beauty, Fall Butter, Gansell's Bergamot.  
Fall Bergamot, Golden B. of Bilboa, Heath-  
cote, Mons Jean, Napoleon, Orange Vert,  
Passe Colmar, Seckel, Sugar, and Virga-  
louse.

E. & S. Jones—Quinces; Red Pippin,  
Golden ditto, Mammoth ditto, Vandervere  
ditto, Baldwin, Putnam Russet, Penno-  
ck, Newtown Pippin, from young trees first  
year. Also Pippin, Newtown Pippin, Rhode  
Island Greening, Dewitt, Spitzenberg, Gold-  
en Russet, Rambo, Bellefleur, Harrison,  
Campfield, English Russet, Roxbury ditto.

P. Melendy—Apples, fifteen varieties;  
and Nutmeg Melons.

I. C. Ferris—Yellow Bellefleur, Rhode  
Island Greening, Roxbury Russet, Baldwin,  
Esopus Spitzenberg, White Pippin, Green  
Newtown Pippin, Yellow ditto, White Win-  
ter Pearmain, Grafton Winter Sweeting,  
Golden Russet, Milam, Winesap, Red Win-  
ter Sweeting, Rambo, Autumn Strawberry,  
Fallowater, Penno-ck, Dewitt, White Seek-  
no-further, Vandervere Pippin, 2 unknown.

William Resor—Grapes, *foreign*; Black  
Hamburg, Victoria Hamburg, Black Prince,  
Verdello, White Frontignan, Traminer.  
Pears; Easter Beurre, Echasserie, Duchesse  
d'Angouleme, Swan's Egg, Pound, Freder-  
ick of Wurtemberg, Napoleon, White Do-  
yenne, Maria Louise, Winter Bon Chretien,  
Bleeker's Meadow, Beurre d'Aremberg,  
Beurre de Capiaumont, Heathcote, Lewis,  
Compte de Lamy.

S. Mosher—Apples; Newtown Spitzen-  
berg, Smith's Cider, Yellow Newtown Pip-  
pin, Titus Pippin.

G. Sleath—Ten varieties of Apples, three  
varieties of Pears. Grapes; Catawba,  
Cape, and Isabella, in quantity.

H. Ives—Six plates of Catawba Grapes,  
two citron Melons.

A. H. Ernst—Apples, a collection of 34  
varieties. Pears, 12 varieties. Quinces.

Thorp, Smith, Hanchett & Co., Syracuse  
Nurseries—Pears; St. Nicholas, Winter  
Nelis, Easter Beurre, Marie Louise, Oswego  
Beurre, Le Cure, Belle Lucrative, Des  
Nones, St. Michael Archange, Doyenne de  
Fais, Gray Doyenne, Duchesse Panachee,  
Belle Alliance, Doyenne Sciennle, Beurre

Capiaumont, Buffum, Triomphe de Jodoigne,  
Chaumontelle, Beurre Millet, Beurre Bosc,  
Napoleon, Doyenne Robin, Holland Berga-  
mot, Beurre Diel, Jalousie de Fontenay, Duc  
de Bordeaux, White Doyenne, Duchesse  
d'Angouleme, Ananas, Seckel, Catinka,  
Passe Tardive, Stevens' Genessee, Louise  
Bonne de Jersey, Onondaga, Broompark,  
Chamoisin, Van Mons Leon le Clerc, Doyenne  
Goubault, Beurre d'Angleterre, Dumas,  
Pound, De Bavay, Gansell's Bergamot, Dix,  
Doyenne d'Alençon, Soldat Laboureur,  
Bartlett, Viscompte de Spoelberg, Catillac,  
Fondante de Malines, Brown Beurre, Col-  
mar d'Aremberg, Beurre Charron, Belle de  
Brissac, Holland Bergamot, Beurre d'An-  
jou, Beurre Goubault, Columbia, Du Mortier.  
Apples; Baldwin, Northern Spy, English  
Sweeting, Autumn Strawberry, Winter  
Russet, Roxbury ditto, Golden ditto (?),  
Pomme Grise, Porter, Bellefleur, Esopus  
Spitzenberg, Fall Pippin, Colvert, Permay,  
Kaighn's Spitzenberg (?), Wagener, Prim-  
ate, Fameuse, Fall Jenneting, Ladies Sweet,  
Twenty Ounce, Alexander, Belmont, Van-  
dervere, Peck's Pleasant, Rambo, Red  
Canada, Westfield Seek-no-further, Haw-  
thorden, Black Gilliflower, Rhode Island  
Greening, Lady, Hawley, Swaar, Talman  
Sweet, Pound Royal, Newtown Pippin,  
Newark ditto, Tallow ditto, Seek-no-further,  
Woodstock.

Melancthon S. Wade, Jr.—Apples; Black  
Gilliflower, Esopus, Spitzenberg, Porter,  
Golden Harvey, Rambo, Ohio Spitzenberg,  
Red Ingestrie, Ribston Pippin, English  
Golden Pippin, English Codling, Scarlet  
Nonpareil, Small Late Summer, Yellow In-  
gestrie, Sops of Wine, Talpehocken, Ladies  
Sweeting, Baldwin, American Pippin, Swaar,  
Stroat, Michael Henry, Jonathan, Lady Ap-  
ple, Spanish Reinette or Honey Sweeting,  
Holland Pippin [?] Alexander, Fall Pippin,  
Lyscom [?] Gravenstein. Pears; Bartlett,  
Napoleon, Capiaumont, Autumn Bergamot.  
James K. Ogden—Pound Pears, very  
large and handsome.

M. Rice—Two varieties of Pears. Ap-  
ples, fifteen varieties.

P. Considine—Twenty-four choice Quin-  
ces.

N. Hastings—Grapes; Catawba, Isabella,  
and Cape.

N. Longworth—Grapes; a collection of  
varieties including Lee (like Isabella),

Hyde's Eliza (Isabella), Kennedy's Blue Black (seedling of Isabella), Pennsylvania, Lenoir, Diana, Dr. Young's (Isabella), Carter, Winna, Singleton, Graham, Minor's, Hotehkiss' Fox, Catawba, Cox, Clermont County (Catawba), Singleton, Zane, "A new grape" (Isabella), Arkansas (Catawba), some others from various sources that prove to be Catawba. Foreign varieties, open culture, Hanstretto, Traminer (?) Also, Fox, and River Grapes, received by express, which were utterly worthless.

D. McAvoy—A fine display of Heath Cling Peaches.

Miss Ruffner—Pomegranates.

John H. Lewis—Peaches; Heath Cling.

Mrs. Saunders—Three varieties of Pears.

Mrs. Louderback—Two jars of brandied Peaches, six of preserved Peaches, two ditto Strawberries, one ditto Raspberries, one ditto Crab-Apples, six ditto Seckel Pears, one ditto Pickles.

C. A. Schumann—Eight bottles of Wine.

H. H. Duhme—One bottle Catawba.

Herr L. Rehfuß—presented *Grapes*; No. 1, Catawba, sweeter than usual, said to be the result of mineral manures. No. 2, Catawba without any special manures, and less sweet than No. 1. No. 3, Isabella, specific manure. *Wines*; No. 1, from Catawba, 1851, manured, the must weighed 1.093 or 93°, the wine weighed 0.992 or 8° on the wine-scale, and is perfectly clear. No. 2 Catawba, 1851, no special manure, the must weighed 1.093 or 93°, the specific gravity of wine 0.096 or 4°; not clear.

#### GREEN-HOUSE PLANTS.

W. Heaver—*Maurandia Barclayana*, *Maurandia rosea*, *Maurandia albiflora*, *Salvia splendens* major, *Clerodendron fallax*, two *Rondeletia speciosa*, *Abelia rupestris*, *Scutellaria venenata*, *Adamia versicolor*, *Ixora rosea*, two *Plumbago capensis*, two *Manettia cordifolia*, two *Ruellia juncea*, *Hibiscus sinensis*, two *Cuphea platycentra*, *Angelona Gardneriana*, two *Hypericum monogynum*, two *Guara* in fruit, two *Sedum Seyboldii*, *Begonia Evansiana*, *Begonia parvifolia*, *Begonia zebrina*, *Pentas carnea*, *Tecoma capensis*, *Cyrtoceras reflexus*, *Jasminum Sambac multiflorum*, *Justicia picta*, *Abutilon striatum*, *Oxalis floribunda*, *Oxalis lilacina* (new), *Oxalis frutescens*, *Heliotropium Voltaireanum*, *Heliotropium Souvenir De Liege*,

*Heliotropium Corymbosum*, *Hibiscus sinensis* (roseus), *Hibiscus luteus*, *Hibiscus variegatus*, two *Bouvardia venusta* (new), two *Cœstrum diurmera*, *Veronica Lindleyana*, *Vinca rosea*, *Vinca alba*, *Myrtus communis*, *Achimenes patens*, *Achimenes grandiflora*, *Lantana Sellowii*, *Lantana fucata*, *Lantana aurantiaca*, *Metrosideros semperflorens*, *Sanvatalia procumbens*, *Ficus elastica*, twelve pots varieties of German asters, *Æschynanthus zebrinus*, *Æschynanthus boschianus*.

Edward Kelly—Twelve Coxcombs, Seedling *Petunia*, *Cuphea platycentra*, *Begonia Evansiana*, *Begonia parvifolia*, *Begonia incarnata*, *Begonia fuchsioides*, *Manettia cordifolia*, *Justicia carnea*, *Laurustinus*, *Salvia splendens*, *Thunbergia alata*, *Veronica Lindleyana*, *Vinca rosea* (Catharanthus), *Plumbago capensis*, *Achimenes grandiflora*, *Lantana Ewingii*, *Amaryllis luea*.

Francis Pentland—*Caladium esculentum*, *Justicia speciosa*, *Tradescantia zebrina*, *Hoya carnosa*, *Yucca aloefolia*, *Vinca alba*, *Hibiscus carneus* flo. pl., *Pittosporum tobira sinensis*, *Goldfussia ensiphylla*, *Jasminum revolutum*. *Fuchsias*; *Carolina*, *Napoleon*, *Magnificent*, *Fair Rosamond*, *Beauty of Leeds*, and many other plants.

John Sayers—Four *Salvia splendens* major, *Vinca rosea*, *Vinca Alba*, *Lantana mutabilis*, *Lantana mutabilis major*, *Lantana mutabilis Ewingii*, *Lantana mutabilis seedling*, *Plumbago capensis*, *Abutilon striatum*, *Heliotropium souvenir de Lieges*, *Torrenia asiatica*, *Ruellia juncea*, *Maurandia Barclayana rosea* and *alba*, *Manettia cordifolia*, *Cuphea platycentra*, *Asclepias currasavica*, *Egeratum mexicanum*, *Eccecremocarpus scabra*, *Trachelium cœruleum*, *Ruellia floribunda*, *Hibiscus sinensis* flo. pl. *Hibiscus sinensis rubra*, *Double Feverfew*, two *Begonia nitida*, *Begonia parvifolia*, *Begonia Evansiana*, *Begonia fuchsioides*, *Begonia hydrocotifolia*, *Clerodendron speciosum*, *Rondeletia*, *Fuchsia Carolina*, *Ficus elastica*, *Cryptomeria Japonica*. *Verbenas*; *General Brea*, *Paul and Virginia*, two *Defiance*, *Ariadne*, three *St. Marguerite*, *Striped Eclipse*, *Graciosa*, *White Perfection*, *America*, *Nectar cup*, *Forget-me-not*, *Magnificent*, *Wonderful*, *Diadem*, *Adelia*, *May morn*, *Reine du jour*, *Ephigénie*, *Morphe*, *Heroine*. *New Scarlet Geraniums*; *Cottage Maid*, *Defiance*, *Admiral Van Tromp*, *Princess Royal*,



Dazzle, Tom Thumb's General, Lucea rosea, General Tom Thumb. Petunias; Enchantress, Sun Dial, Prince of Wales, two Seedlings Nos. 1 and 2, twenty-three pots of German Asters of var., twelve Coxcombs, six Tuberoses, six Antirrhinums. Roses; La Pactole, Tea Adam, Le Similor, Hermosa, Dremond, Souvenir Malmaison, Devoniensis, Lamarque, Josephine Malton, White Daily, Fragrantissima, Saffrano, Melville, Lyonnaise, Marshal Bougard, Bougere, Triomphe du Luxembourg, Trachelium cœruleum, Verbena Snowball, two Californian plants, etc.

Henry Brachmann—Five Pittosporum, three Plumbago capensis, two Plumbago azurea, three Hoya carnosa, five Begonia varieties, three Oxalis, two Vinca rosea, two Salvia splendens, Asclepias currasavica, Tom Thumb geranium, Myrtus communis, two Ruellia, Abutilon Bedfordianum, etc.

Thomas Knott—Aloysia citriodora, Plumbago capensis, two Salvia splendens major, two Manettia cordifolia, four Fuchsias, Geranium Tom Thumb, two Verbenas, Lantana mutabilis major. Roses; nine Souvenir Malmaison, two Dupetit Thouars, Gloire de France, two Hermosa, Henri du Plantier, Diel de Duc d'Orleans, Bouquet de Flore, Leveson Gower, two Purple Crown, Roi de Cramoisie, Paul Joseph, Louis Philippe, Gros Charles, Devoniensis, La Sylphide, Lyonnaise, Bourbon Tea.

Michael Rice—One dozen Coxcombs.

#### CUT FLOWERS.

W. Cox—Dahlias, for best 12; Hyppolite, Sir Edward Antrobus, Mrs. Selden, Prince Albert, Phoenix, Roi des Pointelles, Beauty of Sussex, Striata Perfecta, Toison d'Or, Mrs. Shaw Lefevre, La Tour d'Auvergne, Seraph.

For best six, Toison d'Or, Prince Albert, Hyppolite, Striata Perfecta, Phoenix, Lady Antrobus.

I. C. Ferris—Stands of Dahlias in variety.

James Howarth—3 boxes of cut flowers. Erythrina cristagalli. Roses and Dahlias in varieties. One large Torrenia Asiatica.

G. Sleath—Dahlias in variety.

W. E. Mears—Zinnia elegans of 36 colors, and cut Balsams.

Masters N. S. & R. Shaler—A quantity of wild flowers for decoration, Asters, Solidago, etc.

J. Sayers—Dahlias; Mrs. Richards, Queen of Primroses, Mrs. Selden, Jenny Lind, Striata Perfecta, Miss Vyse, Marshal Soult, Prince Albert, Seraph, Mont Blanc, Elizabeth, Gasparine, Flora Superba, Grant Thorburn, La Tour d'Auvergne, Beauty of Sussex, Emily, Fire Column, Toison d'Or, Indispensable, Madame Zahler, Hyppolite, Rainbow, Gem.

Roses; Hermosa, Green Rose, Purple Crown, Mrs. Bosanquet, Queen of Lombardy, Marshal Villers, Leone Verger, Melville, Bougere, Souvenir de la Malmaison, Saffrano, Ophire, Madame Byrne, Cels, Dr. Roques, Adam, Superba, Marshal Bougard, Duc de Chartres, White Daily, Phillipart, Triomphe du Luxembourg, Louis Philippe, Cardinal Fieschi.

One flower stand containing 14 varieties of Petunias, and several Antirrhinums, Salvias, Delphiniums, and Zinnias.

M. Kelly—A stand of Dahlias, and basket of cut flowers in variety.

R. B. Price—Dahlias; Hyppolite, Richard Cobden, Empereur de Maroc, Made. Zahler, Master Merriman, La Tour d'Auvergne, Marchioness of Lorn, Mont Blanc, Sir Edward Antrobus, Queen of Primroses, Miss Blackmoor, Flora Superba, Roi des Pointelles, Joshua Longstreth, Prince Albert, Striata Formosissima, Toison d'Or, Bijou, Emily, Phoenix, Admiral Stopford.

W. Heaver—Dahlias; for display; do. for best 24. [No lists.]

Verbenas; for display, 36 varieties; also a stand for best 24.

Phloxes; for the best 15; Dahlias and Roses as cut flowers.

Mrs. Bickham—4 Bouquets, and a new fancy Petunia with green margin.

A. H. Ernst—Evergreens and cut flowers.

S. M. Carter—Seedling Verbenas, 5 varieties; Petunias, 5 varieties; Ipomopsis, Portulacca, Xeranthemums, 3 varieties of Balsams, 2 varieties Gilliflowers, 2 varieties Phlox, Geranium, Hibiscus esculentus, Calceolias and Dahlias.

#### BOUQUETS AND DECORATIONS.

Mrs. W. Heaver—Chinese Pagoda, mossed and ornamented; 2 pyramidal bouquets, 2 flat do., a display of 48 bouquets, and an ornamental bouquet stand.

W. Heaver—Dahlias, Roses, and cut flowers for decorating.

Master Heaver Ross—Two ornamental baskets filled with assorted fruit.

W. Cox, Jr.—16 bouquets and cut flowers in variety.

Miss Delia McCullough—Ladies' work or flower basket stand.

H. B. Turrill—2 hand bouquets.

Misses Orange—A cornucopia, two bouquets of wild flowers, three grass bouquets, 13 flower bouquets.

R. B. Price—2 flat bouquets.

John Sayers—A floral device for a plant stand, neatly mossed and well furnished.

Miss Emma Brooks, of Cottage Garden—6 hoop wreaths, 1 pair of pyramidal hand bouquets.

Mrs. Emma Ferguson, of Cottage Garden—1 pair of grass bouquets, and a moss basket of flowers.

Edw. Craig—A cornucopia well filled.

Francis Pentland—2 rustic tubs of plants.

Miss Nelly Gano—2 winter bouquets, containing beautiful grasses, some of which were brought from the east.

Chas. Buchanan—A mossed design.

C. Wardall—Beautiful sheaves of Grain.

D. McAvoy—Floral device and basket.—Bouquets.

#### VEGETABLES.

Wm. Orange—6 Drum-head Cabbages, 12 Parsnips, 14 Beets of 3 varieties, 1 peck of Onions, 6 Cornstalks 15 feet high, 14 ears of large Indian Corn, 3 varieties of Potatoes,  $\frac{1}{2}$  peck of Onions, Gourds, 4 varieties of Squash, etc.

C. Wardall—White Purkey Wheat, weighing 72 pounds per bushel, certified to by Jno. F. Dair & Co., who weighed the bag; 12 Blood Beets, 9 heads of Red Cabbage.

J. M. McCullough—Red and Yellow Tomatoes, Red and Yellow Topped Turnips, Water Melon, 2 varieties Sweet Potatoes, Horse Radish, 2 varieties Irish Potatoes, Lima Beans, Turnip Rooted Beet, Long Blood do., Drum-head, Flat Dutch, and Red Cabbages, Early Horn Carrot, White Solid Celery, Sugar Corn, Tuscarora do., Golden Sioux do., Early Frame and White Spine Cucumber, Purple Egg-Plant, Nutmeg and Pine Apple Melons, Okra, Silver Skin, Red, and Yellow Strasburg Onions, Bell Pepper, Sugar Parsnips, Cashaw and Field Pumpkins, Victoria Rhubarb, Salsify, Yellow bush, White do. and Winter Crookneck Squashes.

M. Rice—6 varieties Tomatoes, 6 do Peppers, 4 do. Beets, 3 do. Potatoes, Parsnips, Carrots, 3 varieties Squashes, 5 do Pumpkins, 2 Egg Plants, Okra, Salsify, 3 varieties Onions, Lettuce, Green Curled Endive, Radishes, Sweet Potatoes, Lima Beans, Sugar Corn, Tuscarora Corn, Bunch Beans, 3 varieties Cabbages.

Dr. Shaler—Yankee Pumpkins.

C. F. Schneicke—Mammoth Pumpkins.

S. M. Carter—1 plate of Fig Tomatoes, 2 do. Lima Beans, 2 pecks of Sweet Potatoes, (Lebanon Yellow,) 3 Sugar Beets (Yellow,) 1 peck of Flat Turnips, Japan Peas, Crook-necked Squash.

Wm. Cox—Tomatoes, 4 varieties, Egg Plants, Celery, Turnips, 2 varieties Radish, Sweet Corn, Girkins, Snap Beans, Japan Pea, (new,) Parsley, Flowering Beans, 3 varieties Onions, Shallots, Pop Corn, Chicken Corn, Carrots, Bugloss, French Turnip, Savoy Cabbage, Drum Head do., Red do., Cucumber, Salsify, Peppers, Scotch Kale, Brocoli, Beets 3 varieties, Squash 4 varieties, Pumpkins, Parsnips, Leeks.

John E. Mottier—Beets; White Sugar, Yellow Sugar, Long Blood; White Spanish and Yellow Lebanon Sweet Potatoes; Yellow Field Corn.

H. B. Turrill—Field Corn, 24 ears, Tuscarora do., Pumpkins 5 varieties, Altringham Carrots, Landreth's Summer Squash, White and Red Lima Beans, Shaker Blue and English White Potatoes.

P. Melendy—12 ears White Field Corn, 12 Yellow do., sheaves of Rye and Wheat, a sample of Barley.

R. Buchanan—Long Sugar Beets, Millet, Chocolate and Egyptian Corn, Palma Christi.

M. S. Wade—Neshannock Potatoes.

W. E. Mears—Brussels Sprouts, 5 varieties of Radish, Kohl Rabi, Okra, Celery, Egg Plants, Sugar Beets.

S. Mosher—Cabbages, Autumn Crook-necked Squashes.

John Sayers— $\frac{1}{2}$  peck of Snap Beans, 6 Drumhead Cabbages.

George Hill—Crooknecked Squash from last year, Egg Plants, Bullnose Pepper.

H. Ives—Four varieties of Tomatoes, 4 do. of Beets, 2 do. of Potatoes, 3 do. of Sugar Corn, 1 do. of Ruta Baga, a lot of White Onions, 3 varieties of Squashes, Salsify, 2 varieties of Carrots, Parsnips, Sugar Loaf

Cabbage, one stool of Wheat with 60 heads, upwards of 3000 grains, Rye 7 feet high.

F. U. Stokes—5 varieties Pumpkins, Squashes, Seed Onions, Bell Peppers, Carrots, Field Corn, Neshannock, White, Orange, Scotch Grey, Shaker Blue and Olean Potatoes.

Thomas McGrew—Fig Tomatoes, Lima Beans, Sweet Potatoes, Sugar Beets, Flat Turnips, Crooknecked Squash, Turnip-rooted Beets, Japan Peas.

#### REPORT OF WINE COMMITTEE.

On September 30th, a committee entered upon the examination of several specimens of wine, presented by L. Rehfuß, H. Duhme, and C. A. Schumann.

They commenced by tasting No. 1, of Schumann, Catawba, 1851, which was considered rather austere.

No. 2, same cask, but found better.

No. 3, Catawba, 1851, a good fair wine.

No. 4, same cask fined, improved by the process.

No. 5, Catawba, 1851, a good wine, rather rough.

No. 6, same cask fined, good, slightly improved.

No. 7, Cape and Isabella mixed, 1851, thought to be better than Claret by some, but not liked by some of the Catawba drinkers.

No. 8, Catawba, 1848, a fine wine, admired by all.

The next bottle was from H. Duhme, Catawba, 1851, clear and bright, mellow, and universally declared a superior wine.

The committee then opened two bottles of Catawba, 1851, furnished by L. Rehfuß, of which A was made from grapes to which special manure had been applied. This was bright, clear, and mellow, like an old wine. The other, B, from Catawba, 1851, made from grapes that had not been so manured. This was declared less matured than A in all its qualities, nor was it clear.

A comparison was then instituted between No. 9. and letter A, Duhme and Rehfuß, both of 1851.

Both were declared to be superior wines, and the decision of excellence was a nice matter; but the majority decided that the Rehfuß wine, made with grapes that had been manured with potassa, was milder and more matured.

The grapes from the two vineyards of Mr. Rehfuß were compared; both were delicious and well ripened, but it was considered that those from the manured land were sweeter and that the pulp was softer.

#### AWARDS.

##### *Awards by the Flower Committee.*

For best display of stove and greenhouse plants, to J. Sayers, prem.	\$15 00
Second do., to W. Heaver do.,	10 00
For best twelve plants, to W. Heaver,	6 00
For best six plants, to Thomas Knott,	3 00
Best specimen plant, to W. Heaver,	1 00
For good specimen plant, Thos. Knott,	1 00
Best display of bouquets, Thos. Knott,	5 00
Best pair hand do., to the same,	2 00
Best pair flat do., to Wm. Heaver,	1 00
For the best pair grass do., in moss vases, to Wm. Cox, Jr.,	3 00
For second do., to Miss Nelly Gano,	2 00
For the best pair composed of indigenous plants, to Mrs. Ferguson,	2 00
For best floral device, to Mrs. Sayers,	7 00
For the second do., to Wm. Cox, Jr.,	4 00
For the best six evergreen wreaths, to Miss Emma Brooks,	2 00
For best design, to Mrs. W. Heaver,	15 00
Best twenty-four dahlias, W. Heaver,	5 00
For the second do., to John Sayers,	3 00
For best twelve do., to Wm. Cox, Sr.,	4 00
For the second do., to Thos. Knott,	2 00
For the best six do., to Wm. Cox, Sr.,	2 00
Best ten varieties phloxes, W. Heaver,	2 00
For the best display of pansies, cut flowers, to Wm. Cox, Sr.,	2 00
For the best twelve varieties verbenas in pots, to John Sayers,	3 00
For the second do., to Edward Kelly,	2 00
For the best twenty-four do., cut flowers, to W. Heaver,	2 00
Best six petunias in pots, John Sayers,	2 00
Best twelve asters in pots, to same,	2 00
For the best twelve coxcombs in pots, to M. Rice,	2 00
For the best six antirrhinums in pots, to John Sayers,	2 00
For the best twenty-four roses in pots, to Thomas Knott,	5 00
For the best six do., to John Sayers,	2 00
Best display of cut flowers, to same,	3 00

##### *Gratuities.*

To Mrs. Lambert, two large bouquets,	1 00
To Miss Delia McCullough, for an ornamented basket of flowers,	2 00

To Ellen McAvoy, basket of flowers,	\$1 00	For the best and most beautifully arranged collection of assorted fruits, to M. McWilliams,	\$5 00
To Wm. Cox, Jr., two large bouquets,	1 00	The following diplomas were awarded :	
To D. McAvoy, for a floral device,	2 00	To S. M. Carter for fruits; Gabriel Sleath,	
To F. Pentland, for a display of plants,	5 00	do.; E. & S. Jones, apples; P. Melendy,	
For a seedling petunia, to Ed. Kelly,	1 00	fruits; W. Orange, fruits; L. Rehfsuss, wine	
To Mrs. Ferguson, basket of flowers,	1 00	and grapes; H. Duhme, do. do.; C. A.	
To Mrs. McAvoy, for two bouquets,	1 00	Schumann, wine; A. H. Ernst, apples and	
To Thos. Knott, two large bouquets,	1 00	pears; H. F. Sedam, fruits; P. Considine,	
To Wm. Heaver, display of Dahlias,	2 00	quinces; Syracuse nursery, fruits; Outcalt,	
To Mrs. W. Heaver, for a display of bouquets, and bouquet stand,	1 00	fruits; F. U. Stokes, fruits; Jno. E. Mot-	
For a specimen of Tom Thumb Geranium, to Thos. Knott,	1 00	tier, apples; P. Bush, apples; J. Frazer,	
For 2 grass bouquets, to Mrs. Ferguson,	2 00	apples; C. F. Schneicke, grapes; Geo. Hill,	
For two bouquets, to Miss E. Brooks,	1 00	fruits.	
For two rustic tubs, to F. Pentland,	1 00	W. ORANGE,	} Committee.
Wm. Cox, for the Committee.		J. P. FOOTE,	
		S. MOSHER,	
		W. HEAVER.	

*Awards of the Committee on Fruits.*

For the best display of peaches, (Heath Cling,) to D. McAvoy,	\$4 00.	<i>Premiums awarded by Vegetable Committee.</i>	
For the best six varieties of pears, to William S. Hatch,	5 00	For the best six drumhead cabbage, to John Sayers,	\$1 00
For best display, to T. V. Peticolas,	8 00	For best six red do., to J. M. McCullough,	1 00
For the second do., to W. Resor,	4 00	For the best peck of potatoes, (Ash-leaved Kidney's,) to H. Ives,	2 00
For display of choice pears and apples, to Thorp, Smith, Hanchett & Co., Syracuse nurseries,	a diploma.	For the best display of potatoes, (20 varieties) to Wm. Cox, Sr.,	4 00
For the best half peck of quinces, to E. & S. Jones,	2 00	For the second best do., (six varieties,) to F. U. Stokes,	2 00
For second best do., to A. H. Ernst,	1 00	For the best quart of Lima beans, to S. M. Carter,	1 00
For best ten varieties of apples, to M. S. Wade, Jr.,	8 00	For the best display of sweet potatoes, to S. M. Carter,	2 00
For second best do., to W. E. Mears,	6 00	For the second best do., to M. Rice,	1 00
For the best display, we recommend the first and second premiums be blended and divided between R. Buchanan and T. V. Peticolas, both being superior collections,	15 00	For the best twelve ears of green corn, to M. Rice,	2 00
For the best three varieties hardy grapes, to R. Buchanan,	5 00	For the best twenty-four ears of corn, (garden) one a new variety, to H. Ives,	3 00
For second do., to M. S. Wade Jr.,	3 00	For the best half peck of snap beans, to M. Rice,	2 00
For the best display, to S. Rintz,	6 00	For the best display of egg plants, to D. McAvoy,	2 00
For second do, John E. Mottier,	4 00	For second best do, to Mr. Parker,	1 00
For best bunch foreign grapes, to William Resor,	3 00	For the best tomatoes, to H. Ives,	2 00
For second best do., to N. Longworth,	2 00	For the second best do., to M. Rice,	1 00
For best three var. do., to W. Resor,	5 00	For best three varieties of squashes, to J. M. McCullough,	2 00
For second do. do., to W. Heaver,	3 00	For the second best two varieties of pumpkins, to H. B. Turrill,	1 00
For best display do., to W. Heaver,	6 00	For the best display of vegetables, in variety, to Wm. Cox, Sr.,	10 00
For best two Muskmelons, to J. M. McCullough,	2 00	For the second best do., to M. Rice,	5 00
For second best do., to W. Cox,	1 00	For best peck turnips, to Mr. Parker,	1 00

For the best peck onions, to M. Rice,	2 00
For best peck onions, grown from the seed sown 1852, to Wm. Cox, Sr.,	1 00
For best twelve blood beets, M. Rice,	1 00
For the best twelve parsnips, to do.,	1 00
For best twenty-four carrots, to do.,	1 00
For best display of peppers, to do.,	1 00
For the best twenty-four roots of salsify, to do.,	1 00

*Gratuitous, or Special Premiums.*

To W. P. Neff, six stalks of celery,	\$1 00
To J. E. Mottier, for display of beets,	1 00
To A. Worthington, for three heads of drumhead cabbage, (best exhibited, but not in number for competition.)	1 00
To Wm. Orange, for fine display of vegetables,	3 00
To J. M. McCullough, for collection of do.,	2 00
To J. E. Mottier, for collection veg.,	\$2 00
To W. E. Mears, for sweet potatoes, too late for competition,	1 00
To T. V. Peticolas, for collection of well grown vegetables,	2 00
To H. Ives, for collection of good vegetables,	3 00
To H. Ives, for a single stool of a bearded white wheat, with sixty heads, containing upward of 3,000 grains,	diploma
To C. Wardall, for a display of white Purkey wheat, weighing 72 lbs. to the bushel, also sheaves of the same,	diploma

RICH. DAVIES, }  
H. IVES, } Com'ees.  
JULIUS BRACE, }

**The American Wine-Growers' Association**

HELD a monthly meeting at the Masonic Hall, Saturday, September 25th, 1852. The President, Dr. Rehfuß, presided.

Mr. Rehfuß, from Committee on Mr. Longworth's communication on the subject of mashing grapes, requested further time; which was granted.

Mr. Rehfuß presented the wine-scale he had purchased of Mr. Bennett, in compliance with the orders of the previous meeting, and pointed out its resemblance to that previously introduced by himself. He then adverted to the great importance of special manuring for grapes, and instanced its effect

on a portion of his own vineyard. This portion has been manured with about fifteen barrels of bone dust, four barrels stable manure (rotted) and four barrels ashes to the acre; the crop was much larger than on other portions of the vineyard, even when more favorably situated; and the fruit is also greatly superior, being very rich in saccharine matter and aroma, and having less of the acidulous taste.

Dr. Mosher gave the result of some experiments he had made in determining the weight of grapes, and the quantity of wine produced from any given weight of them. He found by repeated experiments that, after the rotten and decayed berries had been taken off, the grapes and stems weighed forty pounds to the bushel, and that pressed with the stems, they yielded a gallon of wine to every 11 78-100 lbs. weight, or about 3½ gallons to the bushel. He thought that this was rather less than the usual proportion of wine in other seasons.

Mr. N. Hastings stated that his experiments on the weight of grapes gave precisely the same result.

Mr. Rehfuß observed that his grapes, picked shortly after a rain, gave a larger amount of wine per bushel than during dry weather, but that the wine was of a lighter character. He then explained at some length his method of pruning grape vines in the spring and summer. This is in brief as follows:

He pinches off the tops of all the bearing branches, except the one on each plant, intended to form the bow for next season, above the third eye from the uppermost bunch. He performs this pinching shortly before the opening of the blossoms, and he afterward allows all the laterals that grow from bearing shoots, *above the bunches*, to extend at full length. The shoot intended for next season's bow he allows to grow unrestrained. He believes that pinching off the minute tops of the shoots just previous to the blossoming, increases the power of the vine to set its fruit earlier, as it retards the formation of useless wood at that period, and allows the bunches to assimilate a greater proportion of the sap, enriched with the secretions of the previous seasons, without depriving it of any foliage capable of elaborating new sap.

Mr. Orange reported to the meeting that

he had lately visited the productive vineyard of Robert Buchanan, who had in this unfavorable season fully two-thirds of a crop, and the must of a fine quality. He observed that in summer pruning Mr. B. always allowed the shoot reserved for next season's bow to grow at full length, but pinched off the laterals proceeding from it. That he stopped the bearing shoots three eyes above the bunch, and afterward, during the season, pinched off the laterals thrown out by those shoots when they had grown a few eyes. He expatiated on the beautiful appearance of Mr. B.'s vineyard, and the high culture he pursued, and attributed Mr. B.'s almost unvarying success to his excellent management.

A highly interesting and scientific discussion ensued between Messrs. Rehfuß and Mosher, in which some other members participated, respecting the modes of pruning adopted, and the power of the bunches and berries to absorb and assimilate sap elaborated in contiguous branches; after which the meeting adjourned.

#### Massachusetts Horticultural Society.

THE annual exhibition of the Massachusetts Horticultural Society opened in the public garden on Tuesday, and continued till Thursday night. The display took place under Wright's mammoth tent, and was probably the finest exhibition of fruits and vegetables ever witnessed in this country. The collection of pears was one of the most remarkable sights in the pomological line we ever beheld. Marshall P. Wilder, of Dorchester, had 260 varieties; R. Manning, of Salem, 167; S. Walker, of Roxbury, 137; Hovey & Co., 150; B. V. French, of Braintree, of 160. The last named gentleman also had 180 varieties of apples.

There were likewise many noble specimens of peaches, plums, grapes, etc. The display of vegetables was also very attractive. Mrs. S. W. Cole, of Chelsea, exhibited fifty varieties of seedling potatoes, which attracted much attention. Mammoth squashes, melons, beets, parsneps, potatoes, cabbages, etc., were in abundance. The floral collection was not very extensive, but included many rare and choice flowers, and the bouquets and flower-pieces with which the tables were decorated, added much to the beauty of the

scene. The members of the Horticultural Society could not but have felt proud of their exhibition, and all who witnessed the display, must henceforth cherish a deeper respect for the noble art to whose advancement the Society is devoted.—*N. E. Farmer.*

#### Pennsylvania Horticultural Society.

NEW AND RARE PLANTS.—Among the rare plants exhibited at the annual exhibition of the Pennsylvania Horticultural Society, as noticed in the *Philadelphia Florist*, were *Amherstia nobilis*, very rare, and lately introduced at a great cost from the collection of F. Lenning, Esq., also *Allemanda neriifolia* and *A. Schottii*, *Brownea coccinea*, a fine tropical leguminous plant with rich ample foliage and producing fine heads of bright scarlet flowers, *Brownea grandiceps*, a plant with magnificent and striking foliage allied to the former. *Tacsonia sanguinea*, also quite new, but seemingly identical with a plant introduced under the name of *Passiflora diversiflora*; the close connection of the genus *Tacsonia* with that of *Passiflora* is well known. *Ixora Griffithii*, *Anopteris glandulosa*, *Stephanotis Thouarsii* were also observed as rather rare. This unique collection contained also *Medinilla Sieboldii*, *M. speciosa* and *M. magnifica*, three fine *Melastomaceous* plants, two of which have been known for some time in several collections around the city.

A choice collection of exotic Ferns was exhibited by James Bisset, Sr., gardener to James Dundas, Esq., and were much admired. Many fine plants were contributed from Mr. Dundas' houses, amongst which were *Carolina princeps*, *Zamia horrida*, the *Tapioca Tree*, *Hura crepitans* or *Sad Box Tree*, *Fourcroya gigantea*, *Nepenthes Rafflesiana*, or *Raffles' Pitcher Plant*.

#### West Chester Horticultural Society,

Also held its exhibition on the 16th, 17th, and 18th of September. The affair was prosperous and realized the expectations of the managers. The list of competitors and contributors was extensive. The premiums for the best display of Green-House Plants and for the best display of Dahlias were awarded to P. Morris & Co. For the best display of Fruits was awarded to A. Marshall & Co.—*Philadelphia Florist.*

**New York Horticultural Society.**

At the fall show, fine grapes were exhibited from the houses of J. C. Green, Esq., Staten Island, William Charlton, gardener, which obtained the first premium. His collection consisted of—

Syrian, bunches weighing, 2 lbs. 14 oz. each				
Xeres,	"	2	"	3
Black Hamburg,	"	3	"	1
Victoria,	"	2	"	1
Black Prince,	"	1	"	13
Austrian Muscat,	"	1	"	1
Deacon's Superb,	"	1	"	4
Reine de Nice,	"	2	"	9

The exhibition of plants and flowers was extensive and varied, and the second great exhibition increased the prospect of a flourishing society being established permanently in New York.—*Philadelphia Florist*.

**Horticultural Society of Maryland.**

[REPORTED FOR THE HORTICULTURAL REVIEW.]

THE second annual exhibition since the reorganization of the society, was held in the New Assembly Rooms, Baltimore, on the 22d, 23d, and 24th of September, and was in all respects highly satisfactory and encouraging to those who have been instrumental in the resuscitation of the society. The citizens generally also manifested an approval and interest in the affair, by their presence, and no doubt the members will look upon it as a stimulus for future efforts.

The collection of fruit was not, perhaps, so extensive in variety as we sometimes notice in the reports of societies, but certainly it was well up in quality. There was indeed, no inferior fruit shown; and the perfection in which pears and grapes were brought, clearly indicates the adaptability of this locality for the production of superior fruit, more particularly grapes, of which many fine specimens, both of native and foreign varieties, were exhibited. It would be out of the question to particularize all the articles; a few of the most prominent may be mentioned. To begin with fruit:

**Grapes.**—George Brown, Esq., sent a collection of foreign varieties grown under glass; fine bunches of Black Hamburg, Muscat of Alexandria, White and Grizzly Frontignan, Tripoli, etc. The Black Hamburgs of Captain Pracht, grown in the open air, were little inferior to those men-

tioned above. Isabella grapes, by the same gentleman, were also superior. N. Popplein, Esq., exhibited specimens of Catawba, Isabella, Schuykill Muscadell, Bland's Virginia, Elsinboro, and Red Tokay. Many other parcels of native grapes were shown, in great perfection.

**Peaches**, were deficient in quantity, their season being nearly over. Mrs. Dr. Wolf had fine seedlings; one weighed twelve ounces. Mr. L. Young had two baskets of fine looking fruit.

**Pears**, were in profusion. Mr. Jardin, (of Washington City,) and Messrs. S. Feast & Sons, had each large collections, numbering some sixty specimens of the leading kinds. Mr. Popplein, also, a dozen select varieties, fine specimens. Mr. Kemp sent a dish of Seckel, large and fair. And Mrs. Winans a quantity of White Doyenne, of superior appearance. There were numerous contributions of this fruit, many fine late kinds were shown. This locality seems particularly favorable for late pears, such as Easter Beurre, Winter Nelis, Glout Morceau, Urbaniste, etc.

**Apples, Figs, and Quinces**, were also well represented. A basket of Siberian Crab apples from Dr. Edmondson, were models in shape and color.

**Vegetables.**—Baltimore market is supplied with as fine vegetables as any other city in the country. Several gardeners sent specimens of their cultivation and skill. Messrs. J. Register, W. C. Whittemore, and D. & J. Leesbby, contributed largely. Mr. Kemp sent a dish of green peas, not commonly seen here at this season. Dr. Edmondson sent a large assortment; among other things a bushel of St. Helena potatoes, a larger and earlier variety than the Mercer, equally good when cooked. For a field crop they have not been tested. Should they prove sufficiently productive, they will be an acquisition.

In the *Plant* department the display was very superior, both in regard to large specimens and new and rare species. The president, Dr. Edmondson, contributed a very large and varied collection of specimen plants: *Dracœnias*, *Astrapæa*, *Metrosideros*, Chinese Yew, *Hoya*, *Cactus*, *Sago* and other Palms, *Crinum amabile*, with many and very large flowers. These plants were of very large size, and added materially to the in-

terest of the exhibition. A select lot of beautiful *Achimenes*, also graced this collection. Few private collections in this country can equal Dr. Edmondson's in large specimens of rare plants, all kept in fine health under the management of his gardener, Mr. C. Campbell.

John Feast sent a large contribution of new and rare plants, many shown for the first time in this city. A few may be noted, as *Chirita moonii*, *Cyrtoceras reflexa*, *Centradenia floribunda*, *Allemanda cathartica*, *Aschynanthes zebrina*, *Echites picta*, *Bonapartea juncea*, (on the eve of flowering, having a strong flower stem two feet high,) *Combretum purpureum*, *Hoya imperialis*, *H. bella* and *H. picta*, *Luculia gratissima* and *pinciana*, *Musa Cavendishii*, *Prostanthera violacea* and *rotundifolia*, *Tetratheca verticillata*, *Ipomea Horsfallii*, *Kalosanthes miniatus*, *Begonias*, *alba*, *coccinea*, *sanguinea*, *hydrocotifolia*, and *fuchsiodes*, *Gloriosa superba* in flower, with many other fine plants.

Messrs. S. Feast & Sons had a large display. We shall name a few of this choice collection: Coffee and Tea plants, *Maranta zebrina*, *Veronica Andersonii*, *Abelia rupestris*, *Carolina princeps*, *Achimenes* in variety, *Yucca aloefolia*, *Pompone chrysanthemums*, etc.

E. Kurtz, Esq., sent a beautiful flowering specimen of *Crowea siliqua*, *Manettia bicolor* in a mass of flowers. Also several fine plants of the Yellow Tea rose, in bloom, in the management of which this gentleman is peculiarly successful.

Messrs. Pentland & Brother, Greenmount Gardens, also exhibited a collection of plants. *Russellia juncea* in fine condition. Fine specimens of evergreens, *Taxodium sempervirens*, *Deodar* and *Lebanon cedars*, a very large bush of *Epiphyllum truncatum*, grafted on a stem four feet high, was conspicuous.

Thomas Winans, Esq., sent a well selected variety of green-house plants; a number of Cape Heaths in luxuriant health; also *Epacris*, *Chorozemas*, etc.

Many others of the members sent plants, some of which were worthy of particular notice. Floral ornaments, bouquets and cut flowers were sent in great profusion; among the former those of the Messrs. Pentland, S. Feast & Sons, C. W. Stobice, John Feast

and Mr. Fuss, were the best. Bouquets were sent by R. Holliday, J. Galloway, Mr. Waters, Mr. Fuss, the Messrs. Feast, Mohler, and others. The ladies were as usual conspicuous in this department. The Misses Feast, Baker, Pentland and Cushing, aided much in the arrangement and interest of the show, by their skill and attention. Upon the whole, this exhibition compares favorably with the best of the older societies, and augurs well for the horticultural skill and taste of our city.

WILLIAM SAUNDERS, *Cor. Sec'y.*

#### Indiana State Fair.

THIS giant young state has been making great advances in many directions; railroads, canals, and other evidences of progress are everywhere apparent. It is well that we may cite another evidence of progression, and that too, among a portion of the population who are often prone to the opposite condition, that of *status*. In January last, the organization of a State Board of Agriculture was completed, and now the labors of that body have produced a first State Fair, which is indeed highly creditable to them and to the contributors. It has been considered superior in many respects to the first similar effort of our own boasted state.

We shall scarcely admit that it was so in the horticultural department, because we had the aid of green-houses and large gardens, and our Fair occurred in the season of the vintage, when our hills were crowned with the purple grape, and moreover, large collections of apples and other fruits were collected for the Pomological Congress then holding a simultaneous and associated session. Making due allowances for these deficiencies, it will be acceded by all, that our neighbors have followed the noble example set them, and that they have bid fair to become formidable rivals in the race.

It was so late in the season, there were so few green-houses accessible to draw upon for plants, and so much indifference was mani-



fested by farmers and gardeners in the neighborhood, that the managers were discouraged from erecting a separate building for a "Floral Hall," and the contributors in that department were obliged to be content with a portion of Manufacturers' Hall. To all horticulturists and pomologists this became at once a point of attraction. Here they might be seen studying, comparing and taking notes, examining fruits, admiring plants and flowers, or chatting with the vegetable competitors.

Potatos are decidedly a favorite crop in this state, especially where the farmer is well situated for shipping. Some of the most remarkable were the Neshannock, from John Levering, of Tippecanoe, which were unusually long, and must have yielded an enormous crop. Other varieties appeared in abundance, but the most interesting were the "Veto," so named by Mr. Aldridge, of Indianapolis, who received it from Maine. The specimens were cultivated by J. M. Barneclo, and are very long.

Two sets of seedlings were presented, but I do not know what were the awards of the committee. Those by J. M. H. Allison, of Pt. Commerce, Green county, were rather below medium size, slightly varying in shape, generally long, though of two or three varieties apparently, all resembling one another very much in the color and appearance of the skin and flesh, which was white. They were the produce of seed sown 20th of last April! If so, their size and similarity are remarkable; especially when we learn that the ball was plucked from a black potato, upon either side of which were rows of the pinkeye, and of the white kidney. The other seedling was presented by Thos. Martin, of Augusta, Washington county. It is a rough-skinned, dark-colored potato, which he has christened "Blue Neshannock." It was raised from seed of the Shaker Blue

three years since. It is long, very dark, and has the blue color pervading the flesh, and requires the water to be changed while boiling. After which it is white, and very dry and mealy.

While upon this topic, I must allude to a sample of large potatoes, presented by Sterne Brunson, a large farmer and orchardist of Elkhart county. They were accompanied with a statement which makes it apparent that one hundred and twenty-five dollars, clear profit, was realized from the crop, six hundred bushels per acre, after deducting the full cost of cultivation, seed, rent, etc.

One of the finest collections of vegetables on the tables, was that of Allen Lloyd, the gardener of Lafayette. He presented mammoth sugar corn; very handsome beets, which were long, red, smooth, and in fact, looked as though they had been fashioned upon a turning lathe. Fine peppers, assorted beans and peas, salads, cabbages, and various other vegetables appeared upon his table, and reflected great credit upon his skill, which would enable him to compete with city gardeners.

D. S. Avery had fine large globe turnips, beautiful onions from seed, a variety of beans and peas, and a good assortment. John W. Parker was one of the most prominent with sweet potatoes. Mr. Cady, of the immediate neighborhood, had a very extensive collection of vegetables, embracing some things not often seen. The specimens were not large, and showed the effect of the drought, but from their variety deserved attention. Next to them was the handsome collection of M. G. Kern, who also presented plants and flowers, and a floral ornament. Cut flowers were chiefly contributed by the ladies; their names, however, it was not easy to obtain. The best display of roses, and one that would not disgrace any tables, was that from Mrs. Temperle, of Madison, whence

also came the best display of Dahlias, and some large bouquets, from the hands of Miss E. J. Todd.

The fruits, though not so numerous as had been hoped, were of great interest, and were critically studied, even before I had any expectation of serving upon the committee. Some of the collections were large, especially those of R. W. Todd, P. Howland, Fielding Beeler, and Gen. Joseph Orr. They will be more especially noticed, however, in the report of the committee, quite an elaborate document, which the Executive Committee have allowed me to use in advance of their publication. It will appear in the next number. One thing was observed, in many of the collections, which could not have been expected otherwise—the defective nomenclature. But this Fair was the very place and time for the owners of orchards, and especially for nurserymen, to embrace the opportunity of comparing notes and fruits, so as to avoid future errors; but alas! of the dozen nurserymen within the neighborhood of that Fair, how few were upon the ground! They surely were not afraid to see the test of exposing the fruits of their own trees to the criticisms of a committee.

Want of space compels me to close this notice of a most agreeable occasion, without even acknowledging the kind attentions bestowed by the members of the State Board and all others, officers and privates, with whom I was thrown in contact. May the agreeable intercourse be long remembered by all, and may the favorable impressions of the week result in more enduring and useful friendships among the many who there met from distant points!

#### The Zanesville Society

CONTINUES to hold agreeable and useful meetings, at which fine displays of fruits are often made. The pears appear not to be obnoxious to the blight in that region;

at least this is stated of some varieties.—The lists of apples embrace the Cooper, among many old varieties.

#### Washtenaw County Fair—(Michigan.)

WHEN taking a pleasant tour through the state of Michigan, last month, I observed that the good people of Washtenaw, and its pretty villages, were making great preparations for their county fair. A kind friend from Ypsilanti has sent me the newspaper account of the happy result, which is flattering indeed.

The attendance amounted to ten thousand, or every third inhabitant of the county. The number of entries was large, and a favorable comparison is drawn between this and the recent State Fair. The grounds were well selected, with a good turf, plenty of shade and water, and every convenience.

Floral hall was under the excellent care of the ladies, many of whom are spirited amateur florists, and readers of horticultural periodicals. The other halls, which were large and commodious, were well filled from the shops of domestic workmen. Efforts appear to have been making in this county to restore the potato, and the specimens shown are highly commended; so are the products of the garden generally, which are represented as good, notwithstanding the severe drought of the summer.

#### County Fairs.

DURING the month of October there have been many very interesting meetings of agriculturists at different points in this and the neighboring states, a few of which only can be briefly noticed. Horticulture and pomology are beginning to attract more attention, from the sturdy agriculturist, than heretofore; and this may be looked upon as evidence that he feels their gentle, humanizing influences.—Ed.

#### CLARK AND MADISON COUNTIES.

The enterprising farmers of these two counties have held a glorious agricultural jubilee. A friend who was present speaks in high terms of the result. Fine stock of different kinds, was presented. Among the successful competitors in this line, was Eli

GWRINA, the early pioneer upon the grassy plains of Madison county,

The ladies turned out in large numbers, with their domestic wares of every kind; and this is a feature that we are glad to see is becoming more and more characteristic of our country shows. It is well that it is so—what woman smiles upon must prosper.

A large and liberal premium list was awarded, and after the Secretary had read the Reports of Committees—which, it seems, are made with all the system of the State Society at its Fair—one of our citizens, who is a devoted admirer of the field and the garden, (no other than J. A. WARDER, editor of the *Western Horticultural Review*,) appeared, and addressed the audience for nearly an hour, upon a discussion of the soils of the two counties, and their proper treatment. The first section required him to dip a little into geology, though he endeavored to avoid being *too* scientific; the latter section inculcated thorough tillage, thorough farming and thorough drainage of the land. At the close, the speaker was surrounded by many who were desirous of further details upon the practical advice given. The audience then dispersed to their several homes, well pleased with the result of the Fair.—*Cin. Commercial*.

#### DELAWARE COUNTY.

The Olentangy country has been rejoicing in the festival which has just closed. Our friend, A. Thomson, of the "*Gazette*," being quite a horticulturist and a prominent member, our favorite department of agriculture, the fruits and flowers, received due attention. This is the region where the Traminer grape (European) has proved its hardy

character for several years. It was received thence by Mr. Longworth, who has fruited it and ascertained its foreign name. How many more discoveries of equal value may we not anticipate from these county organizations! (See p. 101.)

#### FRANKLIN COUNTY.

This central society held its annual Fair on the same days occupied by the grazers and farmers on the plains, and not having witnessed their doings, I can only report the result of their proceedings, as gathered from "*the Statesman*," which is always prompt in giving attention to the agricultural interests. From this it appears that the exhibition was very good, and a liberal premium list was awarded. Several books appear among the awards. This is well.

#### CUYAHOGA COUNTY.

Cleveland was again the scene of joyous excitement during the county Fair of the great Lake region, where the farmers occupied the ground and buildings put up by the State Board, and held a great Fair.

#### PREBLE COUNTY, AT EATON.

A very spirited fair was held at this town on Friday, the 15th. I was exceedingly disappointed at the necessity which prevented my personal attendance. M. B. Bateham, editor of the *Ohio Cultivator*, who was there and addressed the farmers, says it was a capital show.

Many other societies, horticultural, agricultural, and mechanical, have had their meetings within the month, but it is impossible either to visit, or even to notice them all.

## Editorial.

### ACKNOWLEDGMENTS.

REPORT ON THE WORLD'S FAIR, to the Governor of New York—by B. P. Johnson, Esq., the agent appointed by the State, and the devoted Secretary of the State Agricultural Society.

Mr. Johnson's familiarity with the sub-

jects and his acumen, rendered him a most valuable conservator and advocate of the interests of his fellow-countrymen, many of whom may thank him for advocating their claims before jurors, so that the merits of their articles were appreciated and received

awards, instead of being overlooked. As he himself says, this is a mere business report; but he has rendered it a very useful document for our manufacturers and other citizens, and a valuable record of the articles shown. As such I shall value it, and highly esteem it for the sake of the donor.

**TRANSACTIONS OF THE WISCONSIN STATE AGRICULTURAL SOCIETY, VOL. I.**—To the able and accomplished secretary, Albert C. Ingham, Esq., I am indebted for this valuable volume, that is better estimated by the character of its articles and their authors, than by a mention of its having 336 pages.

Proud may our young sister feel of this first evidence of the energy of her people and of the productiveness of her soil, as portrayed in the first volume of Transactions of her State Agricultural Society.—Another year has passed, and another fair has been held, which is said to evince progress in the right direction, and all interested will look eagerly for the second volume of her Transactions, which it is hoped the legislature will not delay to print and present to her noble agriculturists.

**TRIAL OF IMPLEMENTS AT GENEVA, N. Y.**—It will be remembered that the New York State Agricultural Society appointed a large and judicious committee to attend this trial last July, and I am now indebted to some kind friend for a neat pamphlet containing their valuable report. From the AWARDS the following extracts are made:

To T. D. Burrall, of Geneva, N. Y., for the best Grain Reaper, diploma and \$50.

J. H. Manny, Wadham's Grove, Mass., for the second best do., (convertible for grass mowing,) \$30.

Seymour & Morgan, Brockport, N. Y., for the third best do., \$20.

J. H. Manny, for the best Mowing Machine, (convertible,) diploma and \$50.

Howard & Co., Buffalo, [Ketchum's,] for the second best Mowing Machine, \$30.

The other awards are here omitted for want of space.

**FRUITS, FLOWERS, AND VEGETABLES.**—Kind friends, sweet friends, be pleased to consider yourselves named especially and individually, as you often are, in the sacred precincts of home, while we enjoy your acceptable favors, choice fruits, lovely and gorgeous flowers, and well grown vegetables. Such offerings are indeed most acceptable, and too refined to be looked upon as bribes, in which capacity, indeed, they would not be received, but rather as delicate evidences of kind regard.

#### Osage Orange.

##### HEDGES ON RAILWAYS.

In the *Prairie Farmer*, for August, it is stated upon the authority of Messrs. Foster and Holmes, of Waverly, Ill., that 30 to 40 bushels of seed were planted in that vicinity this season, and that it has generally germinated well. So look out for plenty of plants, and don't fail to want them all; we have a great county to fence in, and there's nothing like the Maclura, depend upon it.

In the same issue of that journal is a letter to Messrs. Overman, of Canton, Ill., from our worthy fellow-citizen, one of the pioneers in hedging. In its tenor it very much resembles an excellent practical article with which the writer favored the readers of this work a few months since. Indeed, whatever Mr. Neff writes will be read with interest. Having frequently seen a portion of his mulched hedge, I can speak favorably of the plan as applicable where the plow and cultivator cannot be used to advantage, though I should much prefer stirring the soil where that is practicable.

One long line of hedge in a pasture next the railroad, was cut down and mulched

last spring, and then slightly protected from the stock by poles laid in forks over the line of the hedge; it has sprouted up strong and vigorous, but not nearly so much so as if it had been cultivated—in which case it would have borne a severe cutting-back in June, and be now much thickened.

Nearer the city, about Morrow, there are some long stretches of young hedge, planted by the Railroad Company, I believe, at the suggestion, probably, of the very intelligent and worthy superintendent, Mr. Clement, who is quite a cultivator of choice fruits at the village of Morrow. This is an admirable idea which should be copied generally. These lines were planted by Mr. Overman above mentioned, and I observed with regret that they were set too closely. Indeed, it is almost impossible to persuade planters to give this sturdy shrub sufficient space to develop its best characters. Within certain limits, this can never occur, and a great risk is incurred that a portion of the plants will be choked out by crowding.—Never set the shrubs nearer than one foot apart, and better two feet than six inches.

I am sorry to find the editor of the *Indiana Farmer* still urging planters to set their hedges *more closely*, since I firmly believe that it is one of the greatest mistakes which can be made, and will cause more disappointment in the result than any other error which could be committed.

On the Madison and Indianapolis Railroad, also, I was happy to see a portion of hedging; and should be glad to observe more and more, beside the iron ways.

#### Mr. Longworth's Letter,

On page 101, was overlooked among the papers of the society. The grapes were presented since, (v, p. 85,) and a committee, who visited the vines, will soon report in full upon their characters and merits.

#### CORRESPONDENCE.

THE GARDENS OF J. A. KENNICOTT, NORTH-FIELD, W. B. EGAN, CHICAGO, AND J. T. LITTLE, DIXON, ILL.—THE NORTH-WESTERN FRUIT GROWERS' ASSOCIATION, SESSION 1852.

As you could not accompany me in person, my good friend, let me take you in imagination, first in a drive over a plank road and wet prairie, sixteen miles north-west of Chicago, to the residence of our mutual friend, John A. Kennicott, than whom the West has no better or more enthusiastic horticulturist. A wet prairie, as I said, is most of the ground between Chicago and our friend's home. Occasional points called groves, there are, however, where the young wood has grown up, and where the land rises some fifteen or twenty feet above the general level. "The grove" of our friend Kennicott is one of the largest, besides being somewhat higher than any for miles around it.

Leaving the road which passes in front of his grounds, we advance over a broad rising lawn, whereon are planted occasional trees and ornamental shrubs, until about thirty rods from the street we come suddenly upon a cottage, embowered in a thicket of trees and shrubs, both native and foreign, and grouped more to exclude the sun of summer and protect from the winter's winds, than with regard to the character and habits of the trees, or an eye to the gardenesque. Our friend's residence is of the primitive cast; for he came here sixteen years ago, when all was a desolate prairie, built his house of what was then obtainable, and loving comfort and the beauties of nature, he has studied only to make home pleasant and attractive, by entwining the rose and the honeysuckle, nourishing the fir and the oak both within and around the walls, until all partake of and mingle one with the other,

in a harmonious whole that speaks truly the impress of the word "home" as we love to imagine it.

With a large orchard bounding him upon one side, an extensive nursery opposite, and a background of oaks and hickory, our friend has created a little garden of beauty and profit, interesting to the beholder and exciting interest and attention among the surrounding residents. His nursery trees are well grown for the purchaser, but, we fear, unprofitably for himself; and the nursery, which is kept in a most careful manner and with watchful attention to correcting errors in varieties sent him, belongs in a great measure to the Doctor's son, Charles A. Kennicott, a young man of careful, studious, inquiring mind, who will yet make a reputation for himself as a pomologist as well as nurseryman.

Returning to Chicago, we will visit Dr. W. B. Egan's garden, for to his exertions and taste is attributable much of the interest in horticulture and floriculture about Chicago. His garden and residence is now just upon the outskirts of the city, in a south-easterly direction, and upon rather a sandy poor section, yet the skill and care he has exerted have produced specimens in the art of cultivating nature, that make the grounds attractive, and visited by hundreds. We have here some very beautiful specimens of hedging with the American arborvitæ, and also of the trailing juniper. This last by cutting-back, comes up thick and strong, and when a low bordering hedge is required seems to answer well. The Doctor is now starting a hedge of our American yew, so plentifully obtained on the lake islands. If successful, as I see no reason why it should not be, methinks for a screen hedge it will be superior in beauty to any other plant.

Leaving the Doctor's, and passing over a variety of wet and rolling prairie, which

has nothing of attraction or interest to note, we come within some four or five miles of Dixon, and stop on the top of one of the rolling lines of prairie at the residence of J. Little, who having a fine large tract of beautiful rolling prairie land suited to all purposes of farming, prefers rather such pursuits as are agreeable to his tastes; and therefore dropping in a measure the growing of corn and rearing of cattle, he is collecting a nursery of fruit and ornamental trees. With a soil of deep rich prairie mold, lying upon an open dry subsoil, he has one of the best opportunities in the world to grow plants with ease and rapidity. Having but just started, he is careful, so far as opportunities will admit, to avoid errors in nomenclature, and possessing abundance of ground whereon to plant standard trees, he will be enabled to secure correctness as far as is in man's power so to do. To such men the West will incur a debt she can never repay, while to those who unhesitatingly sell anything that is asked for—in other words, sell one variety under a dozen names—there must some day come a rebound that will not sit well upon their shoulders, however much money they may have amassed from the practice.

Leaving Mr. Little's, we pursue our way into the village of Dixon, a prettily located place on the borders of Rock river, with the ground dry and sandy and rising gently from the stream. The first settlers have pursued the too common practice of building their houses on the lowest level, and as close together as possible, thereby aping one of the worst features of a city, and one which no true lover of the country ever beholds without a wish that he had the power of the "genii" to take up each house, and placing them among the groups of trees always to be found in the outskirts of such villages, make beautiful what is now merely useful.

But we have not time to carry out any views on this subject, for the Convention of North-Western Fruit Growers is at hand. This was held in the court-house, where the ladies and amateur fruit growers in and about Dixon, had arranged tables for fruit, vases for flowers, and decorated the room with wreaths and branches of evergreen.

And now we confess to a little of gratified surprise, for the extent of tables was nearly equal to that of our American Pomological Society at Philadelphia, and although not so great a variety of fruits, yet the number was quite as large, and the specimens of many apples exceedingly beautiful. We took liberal notes, and thanks to the friendship extended us, we have promise of notes to be forwarded us from many of the members of the convention, numbering something over fifty, and from these notes we hope to glean much wheat; for of a truth we have not met a more intelligent body of men this season, nor examined so large a collection of fruits from various contributors, where less of error in nomenclature was apparent.

The convention was presided over by our friend Dr. J. Kennicott, the president of the association, and as usual with him the ease of manner and happy flow of spirits which he always possesses, diffused itself over the mass, giving with calm deliberation a cheerful conversational character to the whole, that only made us regret that the time of meeting was not extended beyond the two days. There is so much to discuss at all such conventions, that after gentlemen have traveled hundreds of miles to be present, it seems impolitic to disperse until definite decisions and liberal discussion has been had. Two days only serve to make men, unaccustomed to such meetings, feel at home and at liberty to speak their views.

Five states were represented at this meeting, and fruits from various sections of each

state were there for comparison; and also fruits from Massachusetts, for the purpose of comparing the western grown with its eastern parent. One evening was devoted to the reading of an address and remarks from several gentlemen relative to the subject of pomology, industrial education, etc. The remainder of the session was confined to practical discussion relative to the value and adaptation of varieties of fruits. Full and perfect reports were taken and will soon be published. With entire conviction that such meetings are productive of much benefit to the public, we believe each member voted that the next session, to meet in Chicago, October, 1853, should continue four days, and that the eastern as well as western fruit growers be cordially invited to attend.

E.

#### A New Foreign Hardy Grape.

*To the Cincinnati Horticultural Society.*

GENTLEMEN:—For many years I cultivated foreign wine grapes exclusively, to ascertain if any of them would suit our soil and climate. Importing thousands of roots from the extreme south to the snow-clad hills of France, where the wine region suddenly ends, all proved a failure; and for years I have been rabid with all vine-dressers, who expressed a wish to cultivate the foreign grape. I am now compelled to cave in, and am gratified to do it.

In the fall of 1849, I received a letter from Mr. Francis Carnes, who was on a visit at Delaware, in this state, informing me that he had there seen a foreign grape, of fine quality, and said to be as hardy as any native grape. He referred me to Mr. B. Powers, G. W. Campbell and A. Thompson, of that place, for information. I wrote to the persons, and they sent me samples of the fruit and grafts, and I now have upward of one hundred bunches of the fruit ripening; and will, when fully ripe, send you a bunch, and get our foreign vine-dressers to give us its name and quality. The following is Mr. Thompson's description of the plant and fruit, and its origin:

"It is undoubtedly of foreign origin. But

I have not been able to find a description of it in any work to which I have had access. It was brought to this county some twelve years since by a Mr. Jacob Wofford, who emigrated from Kingswood township, Hunterdon county, New Jersey, where it is in common cultivation." According to Mr. Wofford, it was sent to Mr. P. H. M. Proreart, a French gentleman of that place, from his brother in Italy, some sixty years ago, and was called in the neighborhood the Italian Wine Grape. The vine is perfectly hardy, and makes a vast quantity of wood, which is small, short-jointed, and ripens to the utmost extremity of the shoot. Although I have seen it badly ripened, in unfavorable positions, I have never seen it suffer from that cause, ~~where it had a fair chance.~~ It is a profuse bearer, and ripens full two weeks earlier than the Isabella, and seems to be preferred by those who have tasted it, to any of our native varieties. It is a clear red in color, bunches very small, without shoulders, berries round, uniform in size, and growing compactly on the bunch. Sweet and juicy, with very little pulp, skin thin.

My opinion corresponds with Mr. Thompson's. When the berries begin to change color, it is transparent, and the seed visible. I will next spring furnish some grafts, and some seed, to our vine cultivators. From the seed, I doubt not, larger bunches and larger berries may be produced, and therefore preferable for table grapes. I believe this is the most celebrated of the German wine grapes, and called the Traminer. It also resembles the Red Risling, but I am told that it promises to be of darker color; the color may be darker here, as we have a warmer sun. A Swiss vine-dresser tells me, the same grape is cultivated in Switzerland, and is their best wine grape, and called the Moser. The Risling is highly esteemed in Germany as a wine grape, but the White Risling has the preference, possibly because it is said to be the best bearer. We should also test the White Risling, as it exactly resembles this vine, and will probably suit our climate as well. It will give a fresh impetus to the grape culture, with our German population. They wish, as they did in Germany, not only to sit under their own vine, but under their own Risling grape vine. I hope they will see the day, and have as abundant crops, and as fine a wine from it.

I now have about one hundred varieties of native grapes growing, and many of them in fruit. A few promise to be valuable. As soon as I am satisfied of their value, I shall distribute grafts. Among them, are about one dozen of Fox grapes. Though none of them bear as large fruit as the *Charter Oak*, the plants of which sell from three to five dollars a piece in the East, I will guaranty them all to be better fruit, more worthy of cultivation, and only fit for grafting, except the Minor's Seedling Fox, which is of fair quality. The *Charter Oak*, which I saw, I presume was genuine, the fruit of monstrous size, skin thick, pulp hard, and of inferior quality among the Foxes. I saw a recent publication, saying seedlings would not bear fruit, until ten or twelve years old. This is an error. Mr. Kennedy, of Columbus, wrote me, that one of his seedlings bore the third year.

I have changed my opinion about seedling Catawbas, There is often a disposition to go back to the parent Fox. But I have this season seen many Catawba seedlings, having in the stem and leaf less of the Fox character than the parent. All who have young seedlings in their vineyards should mark the most promising, and remove them in the fall. As soon as the Delaware grape is ripe, I will send a bunch to the Society, with a shoot of the vine, and give due notice, that you may invite our foreign vineyard cultivators to attend and give the child its true name.

Why are the residents on the Lakes so backward in the cultivation of the grape. It will be their own fault, if they do not in a few years rival the Ohio river in the quantity and quality of their wines.

Respectfully,

N. LONGWORTH.

September 4th, 1852.

#### Springfield and its Vicinity—Fruit.

SPRINGFIELD, Aug. 7th, 1852.

THIS beautiful town, long the pride of Ohio villages, is situated at the crossing of the Mad River and Lake Erie Railroad with the National Road; it is also the terminus of the Little Miami Railroad. From early times it has been a remarkable *crossing place*. The hardy adventurers from Kentucky, in their excursions northward, whe-



ther in pursuit of game or Redskins, passed from the Ohio river at Maysville, then "Limestone," and frequently reached this point following a trace which is still known here, and commemorated by the name of one of the streets.

The early settlers were induced to stop at this point because of the great abundance of delicious water that gushes out from the rocks and gravels in perennial springs of crystal brilliancy, supplying the beautiful prairies with abundant irrigation, so that they were constantly enameled with lovely wild flowers of every hue. At a later period the emigrants from New Jersey, on their westward progress, here met those from Kentucky, and soon formed quite a hamlet about the bases of the pretty knolls that abound in this neighborhood, and give so great a beauty and variety to the landscape, as to attract the attention of all travelers who pass daily upon the railways.

However, I did not set out to give a history of the settlement and early times of this pleasant town; but to let your readers know that there is a charming place of retreat from the dust and heat of the city, where they can find a pure air, fresh water and many objects of interest, accessible by lovely walks and rides, and all this within a few hours of Cincinnati, with a choice of railroads passing through the beautiful valleys of either the Great or the Little Miami rivers, which, by the by, may be looked upon as throats or funnels through which the rich productions of this portion of our favored state are poured into the lap of its great emporium.

The valley of Buck creek, the eastern branch of Mad river is one of the most beautiful you can imagine. An elevated region, a gently rolling or undulating wooded and prairie country, now highly improved by snug, skillful farmers, among whom evidences of good taste begin to be everywhere apparent, in their gardens and orchards.

In one of my excursions, I had a delightful ramble to the north-east of the town, where there is a tract of rolling upland, in a high state of culture, under the judicious management of Wm. Cooper, Esq., a Pennsylvania farmer, who has here carried out the principles of his excellent training, in the admirable management of his farm.—Where but a few years ago he found bare fields, badly tended by careless tenants, he

now has fine crops, well inclosed, a handsome mansion, garden, shrubbery, orchards, meadows, and barns and every appliance of the complete farm establishment.

The orchards especially indicate that judicious care has been extended to them; by good planting they have grown remarkably, and the constant attention to their growth has enabled Mr. C. to present to the eye of the visitor the most perfect, well balanced, and evenly-shaped set of trees I have ever beheld. Moreover, trees of four to five years' growth, begin to yield remunerative crops of their delicious fruits.

The benefits of trenching the ground by double digging to the depth of nearly two feet, are very apparent in his garden, where, in an elevated position, and during this parched season, when the very prairies have been suffering for the want of rain, his vegetables continue to grow and thrive as though well supplied with the genial shower.

About the door-yard, everything indicates the careful neatness of the good farmer—no slovenly chip-pile, nor dirty duck-ponds; but everything in its place, neat and orderly; a snug wood-house, well supplied, on one hand, and a cleanly swept drain, from the neat milk-house, on the other, leading the fertilizing slops to the garden. While all within the door-yard is a covering of hardly tramped gravel, the whole shaded by the most thrifty plum-trees, now laden to their utmost tension with the luscious fruit that is just ripening. The immunity from the ravages of the curculio is attributed to the hard gravel surface, which is swept daily; and also, in part, to the protection of the buildings, and the frequent disturbance of the passing in and out of the family. Beautiful specimens of some of these plums were sent to the Cincinnati Horticultural Society, and no doubt attracted deserved attention from that learned pomological body.

There are many other neat and well conducted farm establishments, some of which are rendered none the less complete by having good supplies of fruit. One of these, belonging to Mr. Laybourne, attracted my attention on account of an item in the history of his orchard. Like most others planted in early times, the trees are all seedlings, and he says, that not more than three or four in a hundred were tolerably good varieties. So he went to work grafting them

with known sorts, as they were introduced into the neighborhood; among them the Summer Queen, which he finds so thrifty, that it should never be grafted above the ground, lest it overgrow the stock. Some trees of this variety, thirty years old, continue to increase, while other kinds, of the same age, beside them, have not appeared to grow these five years. One specimen measures four feet in girth, above the graft. This difference can scarcely be accidental; indeed, the Summer Queen is known as a thrifty tree in the nursery. Mr. L. has been favor-

ably known among the early pomologists of Ohio. His trials with pears have been unfortunately much interrupted by the fire-blight.

Excuse prolixity, and believe me,

Yours, in the country, J.

This little account of a delightful summer retreat appeared in the Cincinnati Commercial some time back, and has been overlooked and crowded out of an earlier appearance intended for it.—Ed.

### METEOROLOGICAL TABLE.

CINCINNATI, SEPTEMBER, 1852.

THERMOM.			WEATHER.			RAIN.	Date.	WINDS, ETC.
Date.	Min.	Max.	Sunrise.	Noon.	Sunset.			
1	61	84	fog clear.	clear ....	clear ....	....	1	Calm light S.
2	62	90	clear ....	do. ....	rain, ...	20	2	Light S.; brisk SW.; high N.; light W.
3	66	73	do. ....	cloudy ...	clear ....	....	3	Light W. and NW.; calm.
4	59	80	fog clear.	clear ....	do. ....	....	4	Calm; light N.
5	62	82	clear ....	do. ....	do. ....	....	5	Light E.; calm.
6	62	83	fog clear.	do. ....	do. ....	....	6	Calm; light NE.; calm.
7	61	83	clear ....	do. ....	do. ....	....	7	Light E. [Pawpaws ripen.]
8	65	80	cloudy ...	rain ....	rain ....	1:65	8	Light E.; calm at eve.
9	70	80	rain ....	clear ....	clear ....	25	9	Calm; calm.
10	70	81	cloudy ...	do. ....	variable ..	....	10	Calm light W. N. and E.
11	69	76	variable ..	clear rain	rain ....	55	11	Calm light SW.; high W.; thunder & lightning.
12	59	67	clear ....	clear ....	clear ....	....	12	Light W.; brisk W. and NW.
13	48	67	do. ....	do. ....	do. ....	....	13	Light W. and S.; high W.; calm at night.
14	58	80	cloudy ...	do. ....	do. ....	....	14	Calm; light SW.
15	60	65	rain ....	cloudy ...	cloudy ...	25	15	Calm; light NW.
16	55	72	clear ....	clear ....	clear ....	....	16	Calm; light SE. and E.; calm.
17	52	77	do. ....	do. ....	do. ....	....	17	Calm light SE.
18	59	78	cloudy ...	do. ....	var. rain ..	05	18	Light S. and SW.
19	67	72	do. ....	variable ..	cl'dy, rain	20	19	Calm light SE.
20	66	73	do. ....	cloudy ...	rain ....	40	20	Light SE.
21	65	69	variable ..	variable ..	clear ....	....	21	Brisk SW. and W.
22	51	72	fog clear..	clear ....	do. ....	....	22	Light SE.
23	56	77	do. ....	do. ....	cloudy ...	....	23	Light SE., calm.
24	64	73	variable ..	variable ..	clear ....	....	24	Calm; calm.
25	65	76	do. ....	rain ....	var., rain ..	60	25	Calm light SW.; squally NW. at night.
26	55	67	clear ....	clear ....	clear ....	....	26	Light NW. and W.; calm at night.
27	49	71	fog clear..	do. ....	do. ....	....	27	Calm; light S.
28	50	77	clear ....	do. ....	variable ..	....	28	Light S.; brisk S. and SW.; light SW.
29	54	70	do. ....	do. ....	clear ....	....	29	Light NE.
30	50	76	do. ....	do. ....	do. ....	....	30	Calm; light S.
Inches, 4.15							Mean temperature of the month.....67.50	
							do. do. September, 1851.....72.90	
							do. do. do. 1850.....68.53	
							do. do. do. 1849.....68.50	
							do. do. do. 1848.....63.67	
							do. do. do. 1847.....66.00	
							do. do. do. 1846.....72.90	
							do. do. do. 1845.....68.63	
							30 Mean temperature of the above 8 months, .....68.79	

Clear days in the month.....14  
Variable—sun visible.....13  
Cloudy—sun not visible.....3

### REMARKS.

The weather of this month has been decidedly pleasant, and somewhat over one degree below the usual mean of this month for the last eight years. A heavy rain fell, in a remarkable short time, on the 8th, (say one hour and a half,) unattended by thunder and lightning, of which the proportion has been very small the past summer. The lightning on the 11th struck

the steeple (stone) of the Cathedral, and knocked down the cross. High winds occurred in three days, and a squall, at night, on the 25th; probably altogether they may have prevailed six hours. The equinoctial period passed over, as usual here, without any remarkable atmospheric phenomena. No storm in the month.  
JOHN LEA.

UNIV. OF  
CALIFORNIA



St. Catharine Plum.



VOL. III.

DECEMBER, 1852.

No. 3.

## Pomology.

### REPORT OF THE FRUIT COMMITTEE.

Through the politeness of the Executive Committee of the State Board of Indiana, permission has been obtained to present this report to the world, in advance of their publication.—Ed.

*To the State Board of Agriculture of Indiana:*

FELLOW-CITIZENS:—We, your committee, appointed to examine and adjudicate the entries in class I, No. 3, having entered upon the interesting duties assigned us, with a determination to execute the responsible trust with as much thoroughness and impartiality as possible, and having devoted ourselves to the business in hand with unremitting attention during almost the whole day, drew our labors to a close about sunset, and now beg leave to

#### REPORT;

That we have been highly gratified with the appearance of the fruits presented; which were varied and numerous, reflecting great credit upon the public spirit and industry of the individuals who so heartily lent you their aid to sustain the credit of the state and of the society, as well as to prove the adaptation of the soil to the production of the rich gifts of Providence, which contribute greatly to the wealth, health, and

happiness of the people. For all these and numberless other unmerited blessings, we commend a due acknowledgment of thankfulness to the Giver of all good gifts.

These great gatherings of the people of our state, and visitors from other states, besides the general advantage of humanizing us by creating an opportunity for social intercourse between those who are widely separated, and often, from the very nature of their engagements, very closely confined to the limits of their own farms and neighborhoods, have the further and important advantage, in the department of industrial production now under consideration, of enabling nurserymen and orchardists to interchange views, and impart to each other valuable information respecting fruits. This latter consideration has been remarkably exemplified and verified here, as, indeed, it has ever been, at all the meetings of a similar kind we have had the pleasure of attending. Especially is this true in the opportunity afforded for the correction of nomenclature; and this is a very important matter, for the extensive synonymy of some

of our best fruits has caused a great deal of confusion, which, unless corrected, will continue to increase—as a good apple frequently obtains a new cognomen in every neighborhood.

Another great advantage which is apparent at these fairs, is the sifting which the fruits receive, by which the extended lists of varieties are cut down to a reasonable limit, by rejecting as unworthy general approbation, many fruits that have enjoyed a local reputation far beyond their deserts. It is true, no one man nor set of men can pretend to judge in a matter of taste for every other member of the human family, so differently are our gustatory organs constituted; but it is possible and highly profitable for a body of experienced pomologists to decide what varieties are worthy of *general culture*. This is all that is attempted.

A third and deeply interesting result of these exhibitions of fruits from different portions of the country, is that we thus learn the peculiar fitness of certain soils and situations for different sorts of fruits; and, as we are sincerely anxious to see more and more attention paid by agriculturists to the geological condition of the soils of our state, we recommend that you request future exhibitors to state in writing, with the lists of their fruits handed in to the committees, the character of the soil and other circumstances of the treatment and cultivation of their orchards and vineyards.

**SEEDLINGS.**—The desire for novelty being a strong instinct in the human mind, in addition to the natural desire of every one to have the world admire what he admires and possesses, persons are induced to thrust forward what are called new seedling varieties. This is all well enough in its way, and we consider that you have acted wisely in conforming to the accustomed rule of other bodies, in offering large premiums for good

new seedling varieties of fruits, such as will prove an acquisition to our lists; but you have thereby cast a serious responsibility upon your committee, who are to decide upon the merits of those offered. We have adopted the safe rule suggested by the National Pomological Society, to recommend no new fruit which is not equal to the best of our acknowledged standard varieties, notwithstanding they may be very good in comparison with many fruits extensively cultivated and sold in the markets with a very fair reputation. Nor should any seedling variety be adopted as good and worthy of general culture, until it had been extensively cultivated and proved in different localities and soils. With these views your committee have approached the examination of those offered here, and the practical good sense of the principles we have thus advocated, must be borne in mind by those who have presented seedlings.

Entry No. 1. Winter seedling apples, as we learn from the certificate, were raised from seed and set in an orchard by Joshua Hinesley about twenty years ago; the two kinds are marked Nos. 59 and 74. The former is a fine keeping and fine flavored apple when at maturity in May, hence it is called May Seek-no-further. No. 74 is a better keeper, and at maturity in the last of June and first of July, keeping sometimes to the first of August. It has been named from the planter, Hinesley Pippin. The neighbors are propagating from it. It will be seen in the list below, that the committee have been unable to decide upon the merits of these seedlings, owing to their immature condition, but recommend them for further trial, thinking that they have points of promise.

Entry No. 3. A winter seedling, described as follows by the certificate: Rather above medium size, light yellow color, skin thin and very smooth, color greenish yellow,

ripens from January till March, juicy, resembles the White Bellefleur both in appearance and flavor. The fruit grows in clusters, bears well every alternate year, and less the intervening, but the fruit is then larger. The tree is hardy, having, withstood the severe winter twenty years ago, when two-thirds of an orchard of 200 trees were killed, nor were they injured by last winter, which destroyed so many trees.—The history is, that it was planted by Mr. Joseph Beeler, Sr., in 1823, procured from a nursery on the Whitewater. Recommended for further trial.

Entry No. 2. Fall seedling apple, called Beeler's Sweet, was much admired by some of the committee, and recommended for further trial. It is described in the certificate as having the same history as the winter seedling noted above from Mr. Fielding Beeler; size medium, skin rough, yellow, sweet, and cooks well; it is a late fall apple, though it has been in eating for a month; highly recommended for apple-butter on account of its richness. The original tree is two feet in diameter; it is a sure bearer and is uniformly full enough, never having failed except in years of entire loss; the apples hang on well. It is propagated by Mr. Aldrich and others, and we consider it promising to be a good apple for stock.

*Seedling pears*, winter and autumn, proved to be known varieties.

Under the head of Native Grapes, entry No. 1, we found a plate, presented as a seedling, with the following description in certificate: "It was raised from the seeds of a native grape, name not given, brought from Scituate, Rhode Island, and is the only one of much value among ten or fifteen seedlings of the same planting. It is called DORE, as it fruited about the time of the Governor's liberation. Ripens from the 1st to 10th of August, is perfectly hardy, and

a great bearer." We consider it very sweet, bunches small, berries round, pulp hard, rather dry, and musky—resembles the Clinton very closely. Unfortunately, the contributor brought no leaves nor wood from his vine, and the committee were unable to draw any comparisons, nor to trace any resemblances.

The committee are happy in being able to mention, that a female competitor has successfully entered the lists in the department of Pomology, and feel bound to allude in flattering terms to the fruits presented by Miss E. J. Todd, of Madison.

The collections from James Orr, of LaPorte, Sterne Brunson, of Elkhart, and Mr. J. D. G. Nelson, of Fort Wayne; the two latter not in competition; were very fine, and showed conclusively, the advantages of the northern and sandy portions of the state, for growing handsome specimens of fruit—the same varieties being fairer, smoother and more handsome than when grown in the central and southern portions of the commonwealth.

To the entry of choice apples furnished by Sterne Brunson, the committee, at the request of one of its members, think proper to award a copy of the Western Horticultural Review for the past year—because we think the excellence and beauty of the specimens indicate the correct pomological acumen of the contributor, which we have had abundant reason to esteem and admire, during the labors through which, as our chairman, he has conducted us with much skill. We further desire to recommend to your body, in making out your schedules of premiums for future years, that you should consider the propriety of rendering many of your awards in books and periodicals, of a character appropriate to the articles exhibited in various departments. This plan has been adopted with much success, and has

given great satisfaction where it has been applied in other places; even some of the county societies of our own state have tried it with success.

We can not close this report without alluding to the extreme difficulty experienced in the discharge of our duty, owing to the want of correct arrangement among the clerks, in the preparation of the cards and book presented for our guidance. We do not intend to be severe nor personal in our remarks, and are prepared to make every allowance for those who are new in the business, but beg that you will, in future, endeavor to obviate the difficulty, by having more care exercised in their preparation; every card should not only designate the number of the entry, but also the character of the article entered. These suggestions are made in a kindly spirit, and not in a caviling tone; it is hoped they will be well received.

We now proceed to give the list of entries and awards:

#### LIST OF ENTRIES AND AWARDS.

##### APPLES.

##### *Best and Greatest Varieties of Table Apples.*

No. 1. By Powell Howland—44 varieties, including Golden Russet, Fall Pippin, Rhode Island Greening, Esopus Spitzenberg, Rambo, "Leicester Sweeting," Corlies Sweet, Red Sweet Pippin, Pryor's Red, Yellow Newtown Pippin, Roxbury Russet, White Bellefleur, Beeler's Sweet, Black, Rawle's Janet, Baldwin, for which we award the second premium, a set of teaspoons.

No. 2. R. W. Todd—a large collection, including, Red Bellefleur, White Bellefleur, Putnam Russet, Newtown Pippin, "White Allen," Golden Russet, Rambo and Rambo Franc, Rawle's Janet, Green Everlasting, Ohio Apple, Fall Queen, Harrison, Dewitt, and many new to the committee.

No. 3. J. A. Warder, (of Ohio,) Rome Beauty, not in competition, but exhibited to show the variety to the orchardists of Indiana. This appears to be a large, handsome kind; it is much admired in southern Ohio,

where it originated, and whence it is shipped largely with Pryor's Red, Putnam Russet, and Rawle's Janet, to southern markets—no award.

No. 4. F. Markle—contains some fine specimens and good varieties—no award in this section.

No. 5. Name not known—three varieties, including very fine specimens of Newtown Pippin, and unusually large and fair Rawle's Janet, which are deserving especial note.

No. 6. General Joseph Orr, of Laporte—thirty-four sorts, a beautiful collection of fine specimens of many choice varieties, including, Baldwin, Swaar, Rhode Island Greening, Esopus Spitzenberg, Alexander, Green Newtown Pippin, Yellow Newtown Pippin, Prolific Beauty, Fall Pippin, Maiden's Blush, Westfield Seek-no-further, Belmont, Sweet Russet, Yellow Bellefleur, Sweet Bellefleur, Hubbardston Nonsuch, Rambo, Newtown Spitzenberg or Oxye, Twenty Ounce Pippin, Kaighn's Spitzenberg, Roxbury Russet, English Russet, Herefordshire Pearmain, Black Apple, Glory of the Pippins, Rawle's Janet, Peck's Pleasant, Fameuse, "Old Hundred," Wine Sap, Pryor's Red, Red Sweet Pippin, Lady Apple, and two unknown. To this splendid collection is awarded the first premium for best and greatest variety of Table Apples—a silver cup.

No. 8. Sterne Brunson, of Elkhart—a remarkably fine collection of single specimens, among them a large Scarlet Apple of great beauty, called Murphy. To him is awarded, as a special premium, a volume of the Western Horticultural Review.

##### *For the Best Ten Varieties of Table Apples.*

No. 1. P. Howland—a good collection of ten varieties, distinctly set off by themselves, in proper form; but among which three varieties were not considered quite up to the mark of excellence.

No. 2. R. W. Todd, of Madison—in the large collection of this persevering and veteran pomologist, the committee find these ten varieties: White Bellefleur, Red Bellefleur, Putnam Russet, Newtown Pippin, Golden Russet, Rambo, Rawle's Janet, Ohio, Green Everlasting, Fall Queen, "White Allen," Red Sweeting, to which they award the first premium, \$5.00



No. 4. F. Markle—contains ten varieties, the list of which was not furnished, and can not be made out by the committee, but to which they award the second premium, \$3.00.

*Best Six Winter Apples.*

No. 1. P. Howland—the collection of six varieties set out by this contributor, contained one which the committee considered below the standard.

No. 2. R. W. Todd—this set did not contain six varieties known to the committee as fruits of good quality, besides those already counted and adjudicated.

No. 3. B. Mitchell—offered six varieties, Yellow Bellefleur, Rawle's Janet, Pryor's Red, Newtown Pippin, Esopus Spitzenberg, Green Pippin, and Wine Sap, to which the award was made for the best, a set of silver spoons.

No. 4. F. Markle—these apples were already counted in a previous adjudication in another class.

No. 5. Not found.

No. 6. John Spivey—some fine large fruit with incorrect names, which are Rawle's Janet, Rhode Island Greening, Newtown Pippin, Esopus Spitzenberg, Oxeye, Yellow Bellefleur, Roxbury Russet, are awarded the premium for second best, \$2.00.

No. 7. Not found.

*Fall Seedling Apples.*

No. 1. Not found.

No. 2. F. Beeler—this intelligent and active orchardist presented a sweet autumn fruit, called Beeler's Sweet, with the necessary description, which has been transcribed, and incorporated in the body of the report, highly recommended as a sweet cooking apple, promising to be valuable also for feeding stock; no award rendered for reasons stated above.

*Winter Seedling Apples.*

No. 1. Powell Howland—this enthusiastic and well informed orchardist presented two varieties, marked 59, May Seek-no-further, and 74, Hinesly Pippin, with the necessary papers, (copied in the report;) but as they are long-keeping varieties, and quite immature, the committee can render no award, but recommend for trial.

No. 2. Not found.

No. 3. Fielding Beeler—a winter seedling of great beauty, description copied above; upon this fruit, which is approaching maturity and which resembles the White Bellefleur, which may be called the Prince of Indiana Apples, the committee were divided in opinion—it is recommended for further trial with commendation.

**PEARS.**

*For the Best and Greatest Variety.*

No. 1. P. Howland—consisting of three good Winter, Easter Bergamot, Passe Colmar, Ambrette, and six good autumn varieties, White Doyenne, Seckel, Crassanne, Bergamot, B. d'Arenberg, "Livingston," and "Artillac," (which last was believed to be Wilkinson,) receive the award, a silver cup.

No. 2. E. J. Todd—a large basket of Pound Pears, also six jars of preserved varieties, which are evidence of the care and industry in the cause of Pomology, possessed by the fair contributor. They are awarded the second premium, \$3.00.

No. 3. Not found.

*Winter Pears.*

No. 1. P. Howland—included in previous award.

*Autumn Pears.*

No. 1. P. Howland—included in previous award for collection.

*Seedling Pears, Ten Each.*

No. 1. Name not given—included two lots, one autumn and one winter variety, the former were fine specimens of White Doyenne, the latter believed to be an old variety, probably the Winter Baking, and as no papers were to be found, no award is made. The committee regretted they could not see the owner.

**PEACHES.**

*Best Ten Specimens.*

No. 1. R. W. Todd—presented several varieties of handsome, large fruit, preserved in three jars of spirits, labeled and described; awarded the premium, a set of spoons.

**PLUMS.**

*Collection.*

No. 1. R. W. Todd—presented a bottle of brandied fruit, Prince's Imperial Gage, a very fine variety. The committee were in

doubt as to the propriety of considering this a *collection*, but for their excellence, award a diploma.

## QUINCES.

*For the Best Twelve.*

No. 1. E. J. Todd—large Apple Quinces, are entitled to the award, a set of spoons.

No. 2. Nancy Wilson—to a display of the Pear Quince, nice and smooth, is awarded a diploma.

## GRAPES.

*Best and Most Extensive Collection.*

No. 1. Not found.

No. 2. E. J. Todd—Catawba, Herbemont and a native variety; the former choice varieties are fine of their kinds, and should receive the award, a silver cup.

No. 3. Mrs. Joseph Norman—a large display of Isabella, bunches fine, well ripened, and with no green berries; award a diploma.

*Best Dish of Native Grapes.*

The committee feel at a loss to know whether the Board intended this subdivision to cover *seedlings* or known varieties of native grapes, especially as one was presented which assumed to be a seedling, and was accompanied by the required paper.

No. 1. P. Howland—a plate of dark, round, sweet grapes, described in the report; we recommend it for trial; and now award, for a good native grape, a diploma.

No. 2. E. J. Todd—a plate of Herbemont, a variety which the committee highly recommend as a delicious table grape, and to which they award the first premium, a set of spoons.

## WATER-MELONS.

*For the Best Four Specimens.*

No. 1. Daniel Smith and William Doty—presented the requisite number and accompanying documents; the committee recommend, under the peculiar circumstances, that each receive the diploma and \$3.00.

## MUSK-MELONS.

*For the Best Four.*

No. 1. John M. Barnecko—presented four fine, green-fleshed canteloupes, of high flavor, to which is awarded a diploma and \$2.00.

## CHERRIES.

No. 1. R. W. Todd—showed two jars of

handsome cherries in alcohol, to which we award an "honorable mention."

STERNE BRUNSON,  
J. L. MENAUGH,  
JAMES JACKSON,  
REUBEN RAGAN,  
W. B. BEACH,  
JOHN A. WARDER,  
*Committee.*

*Alkaline Washes for Trees.*

So much apprehension has been felt by those who were anxious to do everything in their power to promote the healthiness of their trees, and who were discouraged by the doleful accounts of some *thorough* experimenters who had overdone the dosing, that the following is recommended as from unquestioned authority.—Ed.

Almost all the alkalies have, in turn, been used for this purpose. The trunks of trees have been whitewashed with lime, and perhaps this is the worst practice which has been resorted to for the destruction of fungi and insects; and although at the time of its application the lime is caustic and will decompose parasitical plants, this action lasts but for a very short time. The lime becomes converted into carbonate of lime, fills the ultimate surfaces of the bark, and prevents the healthy respiration of the tree: therefore, trees which have been treated with whitewash, while they present an apparently clean surface, are not in an entirely healthy state.

Solutions of potash, when saturated, were found occasionally to destroy the tree, and this gave rise to its application in the form of soap, which will adhere for a greater length of time, and was found to be less deleterious.

One alkali, (soda,) however, may be used with impunity, without the fear of injuring the bark of any tree; for while it causes the rapid decay of the dead portions of the bark, it has no effect upon the living parts. If the body and branches of a tree be wetted with a saturated solution of a good quality of sal-soda, such as we have often described as Bleacher's No. 1 Soda, it will invariably improve the health of the tree—the inert portions of the bark will be softened,

and mosses and other fungi, will be decomposed—the cocoons and ova of insects will be destroyed. During the after growth of the tree, the decomposed portions of the bark will be thrown off, leaving a clean and healthy surface. No tree can be fruitful, and improve in size and figure, unless its bark be perfectly clean.

The application of soda, made by dissolving one pound in a gallon of water, and applied in the spring and late summer, will insure vigor not attainable without such means, and will do away with the necessity of scraping or slitting trees to prevent their becoming hide-bound. Such trees as have smooth barks, may be rubbed with a woollen cloth one week after the application of the soda, and a shiny smooth surface will be produced.

We have a few trees to which the soda has been applied for three years in succession to the point where the branches commence, and it is now evident that the portion of the tree thus treated, is larger and in finer health than the part immediately above it. We first saw this treatment at the seat of Robert Rennie, Esq., Lodi, N. J.—*Working Farmer*.

#### Saint Catharine Plum.—DUNAWEL.

THERE are in the world some favored countries that nature takes pleasure in loading with her gifts. Among these countries we should certainly place the rich valley that the river Loire bathes in the part included between Tours and Angers, a distance of about one hundred miles. There all the trees have a luxuriance of vegetation that we scarcely meet with elsewhere. The tree which offers the most profit to the cultivator, and with the least trouble, is the Saint Catharine plum-tree. Indeed the cultivation of this tree has been carried to such an extent that it is not easy to give a perfect idea of it.

In this rich and fertile valley, where the habitations are so near each other that we might call the road between Angers and Tours a long street or faubourg extending from one of these cities to the other, the

gardens are planted with this variety of plum-tree.

If we cross this country in the month of March and April, when the plum-trees are covered with blossoms, we are not astonished that "Tours is called the garden of France, and Angers its nursery."

This plum-tree has spread from the valley to the hills, where it is as common now as in the valley. The cultivation has extended in soils which differ essentially from that of the Loire; this fact proves that the tree is not capricious as to the nature of the earth upon which it grows.

In this valley the ground is formed of the slime that the river has deposited every year by its overflowings for centuries. The soil is calcareous on the hills on the left bank, and schistous on the right, and in some parts argilo-silicious, and in each soil this plum-tree grows well and produces abundant crops.

It is with this kind of fruit that we make the renowned dried fruit, known under the name of the dried plums of Tours, and with which we make so large a trade both in the country and for exportation.

The quantity of plums we gather on a country of about one hundred miles in length and fifty in breadth, is so considerable that it is not possible to establish its precise amount; but several cities—such as Angers, Saumur, Chinon, Bourgueil, Tours, and others—make a commerce which every year produces several million dollars, that spread in the country, and bring comforts that we do not meet with in other localities, where this same culture does not exist.

The Saint Catharine plum is a tree of medium size, about twenty-three feet high; it grows well as pyramid and standard; the branches are long, slender, and little ramified; the shape is slender and meager; many buds grow on the whole length of the

branches so near each other that on a limb of three feet long there are very often from fifty to sixty plums.

It is easy to conceive the excessive abundance of the crop of a tree so loaded with fruit. The fertility of it is not equaled by any other kind, and no other kind is so advantageous for making stewed plums. It is under this latter form, that this kind is furnished to the trade under the name of *Pruneaux de Tours*.

The fruit is of medium size, almost roundish or rather obovate; a deep suture divides it in two parts in its length; the stem is slender, about three-fourths of an inch long, curved at its upper part, inserted in a small cavity; skin fine, pale yellow, and sometimes tinted with red on the sunny side, and lightly covered with a white bloom of great transparency; flesh yellowish, sometimes firm, and adhering to the stone, very juicy, sugary and very agreeably flavored. It ripens in September.

Besides its unrivaled merit as a preserved plum, it is also an excellent dessert fruit.— Though it is not so good as the Green Gage for the latter use, it is nevertheless highly esteemed.

Below is the plan for drying this fruit:

We place the plums upon a round willow basket, about two feet in diameter and two inches in depth; we put in it one layer only; we place the baskets close together in an oven which we have heated just enough to wrinkle the plums; we take them out after twelve hours; we heat the oven again, increasing the heat, and so we continue till the plums become firm; then we press them between the fingers to flatten them, and we continue to do so till the desiccation be suitable. We take great care, at each time that we take them out of the oven, to remove those which are done, to place them together, and prevent their being too dry.

Finally, when they are done enough, we, for the last time, heat the oven as we should do to bake bread; we put the plums in again until they swell, then we take them out; when the oven is half heated, we replace the plums and leave them in all night. Then a white bloom covers them, and they become very beautiful; it is what we call giving the whitening. We sort them by sizes, and we make small baskets. We are obliged to put them eight or ten times into the oven.

If we wish to make what we call *Pruneaux fourrés*, (furry plums) we take out the stone when they are about half done, we replace it by another plum, also without its stone, and continue the cooking.

The Saint Catharine plum-tree produces regularly every year, and when it is yet very young, sometimes in the nurseries, so that after some years it fully pays its owner for the expenses of plantation. No other kind in our country is planted in so great a quantity, nor propagated in so large a number in the nurseries.

ANDRÉ LEROY,

*Angers, France.*

#### Something about Stocks.

ONE of the most interesting subjects of inquiry in connection with pomological science, and one which has received less attention than it deserves, is the mutual relations and influences of the stock and the scion.— That they do thus affect each other is very certain. Observation has shown that if a lot of seedling apples of one or two years' growth are grafted, one half with the Amber Siberian crab and the other half with Baldwin, in a few years the volume of the roots of the former will be double that of the latter; also, if of two seedling peaches, one be budded with plum and the other left to grow naturally, the latter will make a growth of root much beyond the budded one. Of two trees of the same variety of fruit growing side by side in the same soil, one has been known to ripen its fruit ten to

fifteen days later than the other—a difference attributable only to difference in the stocks upon which they were worked; and so of other facts.

The influence of the *stock* upon the scion, being a matter of more practical importance and at the same time apparent to even a casual view, more has been learned with regard to it. For instance, it is found that if the pear be worked on the quince root, the growth is less luxuriant and an earlier tendency to the production of fruit is observed; we find, too, that all varieties of pear do not equally succeed on the quince, some even refusing to grow at all; nor do all varieties of the quince affect the pear alike. If seedlings from the quinces usually seen in market be used, the greater part of the trees grown upon them will be very dwarfish and short lived, and deserving the opinion formerly entertained with regard to all dwarf pears; but let the Angers, or other equally vigorous and rapid growing variety be used, and the trees, under favorable circumstances, will attain an age of thirty to forty years, and become capable of producing several bushels of fruit annually.

The dwarfing seems to be owing to the difference in the organization of the sap vessels; those of the quince being smaller than those of the pear, there is more or less obstruction in the flow of the sap, especially to the *descending* sap, which being detained in the branches tends to the production of fruit buds rather than of wood. When a rapid growing variety of quince is used, the degree of dwarfing produced is just what is desirable, particularly in this climate; for besides the earlier and greater production of fruit, the wood ripens more thoroughly and is thus better able to withstand the severity of our winters. Similar results are produced by working the apple on the Paradise, the peach on the plum, and the cherry on the Mahaleb. As the apple here succeeds satisfactorily on its own root, it is probable the use of the Paradise will be confined to garden trees, and partly as objects of curiosity, while the cherry and peach succeed in Maine only in favored localities; but we have strong hopes that by the use of proper stocks, and the selection of hardy varieties, both these fruits may be successfully cultivated in all parts of the state. In England the peach is as universally cultivated on the

plum as the pear is in France on the quince. The sort there known as the Black Damask succeeds best; perhaps a slower growing variety might be preferable here. It is hoped that cultivators may give a careful trial to these stocks, and make known the results.

Now let us suppose the reverse of this to be practiced, and the quince to be worked on the pear stock, the plum on the peach, etc. What would be the result? Evidently, a great growth of wood and less fruit, the tree short lived; not as the quince rooted pear is, which as soon as it attains a moderate size gives all its strength to the production of fruit, but rather as the man would be short lived, who was obliged to respire only the exhilarating gas—from excessive stimulation he might effect a prodigious amount of muscular exertion, but probably to little profit.

Whether the pear has ever been extensively used as a stock for the quince we are unable to say, but the peach has been fairly tried as a stock for the plum and found wanting. Some dozen years ago peach stocks were largely used in the nurseries at Long Island and its vicinity, they being procurable at a tenth part of the cost of plum stocks, and making *handsome* trees in less time, but like Pindar's razors were only fit to sell. The result (to purchasers) proved so unsatisfactory that very soon some of the catalogues announced, as a matter worthy special notice, "*plums grown at this establishment worked only on plum stocks.*" Not that there were no instances of success; but they were the exception, and not the rule. We know one tree, the Imperial Gage, a free growing variety, and the best adapted to the peach of any, planted in 1839, in a warm, rich, light soil, which has attained a height of twenty-five feet, the trunk eight inches in diameter, which has borne bushels of fruit. This tree, and one other nearly as successful, were all of upward of a hundred which ever bore a single plum. The others made rapid and late growth, and the shoots, not being ripened, were mostly winter-killed, while such as survived the winter soon perished from other causes. In another case, a gentleman of our acquaintance in Massachusetts, purchased upward of five hundred plum-trees on peach roots at about twelve and a half cents each, (suc-

tion trash,) planted them with care in the best possible soil, where the peach ripened regular and good crops, and yet not one in twenty have ever paid the first cost of the tree, a few succeeding passably well for some years.

Our own experience has been still more unfavorable. Of many trees planted in 1841-2, in a strong loam similar to much of the soil of Bangor, not a single one ever bore a plum; cumbering the ground from two to five or seven years, they perished one after another, not one now remaining. What peculiar influences may have been in operation in the exceptional cases, it may be difficult to determine; but unaccountable things do sometimes occur.

On a given number of trees planted in Bangor or elsewhere in Maine, we think it not improbable that as many peaches could be grown on the plum stock, as could plums on the peach stock. S. L. G.

I noticed a communication in your paper of the 4th, over the signature of S. L. G., on "*Something about Stocks*." Any communication from the pen of S. L. Goodale, Esq., of Saco, is entitled to respect, for he is one of the best horticulturists in our state, and he has given much attention to pomological science. It ever affords me much pleasure to read anything from his pen on that subject. His remarks on the pear, when grafted on Angers quince and on the pear stocks, the cherry on the Mahaleb stock, are judicious and valuable; but when he comes to the peach, he must be aware that there are two sides to that question,

and he writes strongly against the peach stock. He is not alone in this. I am happy in having this matter discussed, and let facts and the whole truth come out; though I hope it will not become like the "strawberry question."

Mr. G. closes his article by saying:

"On a given number of trees planted in Bangor or elsewhere in Maine, we think it not improbable that as many peaches could be grown on the plum stock as could plums on the peach stock."

Now for facts. I can call on hundreds of persons to testify to the truth of what I say, and you, Mr. Editor, shall be one of the witnesses in this case, should it be found necessary.

I have a plum-tree in my garden that was worked on a peach root, close to the ground, which is very thrifty. It first showed fruit about seven years ago, and it has ever since annually borne enormously.—Probably no tree of its size on this river, or in the state, has any year exceeded it in the weight of fruit on the tree. The appearance of its branches are somewhat like clusters of grapes or strings of onions—the tree being so heavily loaded that every year I am obliged to prop and tie up the branches to prevent their breaking down. I have annually cut off one of the branches with the plums on it, and carried it to our horticultural exhibition, and our people have seen one each of the years 1849, 50 and 51. If my tree is an exception to the general rule, it is most assuredly a *remarkable one*.

HENRY LITTLE.

—Bangor Courier, in Maine Farmer.



## Vegetable Physiology.

### DEATH OF THE BROUSSONETTIA.

#### "ACCLIMATION" DISCUSSION.

*Letter of Thomas McGechin.*

Presented by R. B. Moore, October 9th, and referred to A. H. Ernst, John Lea, M. Kelly, and R. B. Moore.

DEAR SIR:—Ever since last spring, I have frequently heard the inquiry made: what has killed so many of the beautiful Paper Mulberry shade trees which adorned the streets of this city?

Finding that some persons attribute their destruction to one cause, and some to another, but most to the *cold winter*, when the mercury ranged from ten to twenty-five degrees below zero, and believing this to be erroneous, I will state what I consider the true cause, viz: the early flow of the *sap* in the *spring* being checked by a continued hard frost, followed by a warm sun, injuring it (the sap) by the heat in thawing.

I will give you the following reasons for coming to this conclusion:

*First.* The bark of those killed, soon lost its adhesion to the tree, which, I believe, never takes place when the tree is killed in the winter, and the sap is down.

*Second.* I find that those most exposed to the rays of the sun, and particularly to its reflection from the pavements, have suffered the most.

*Third.* By examining those not quite dead, it will be found that the side most exposed to the sun, is injured most.

And *fourthly.* It will be seen that those not so much exposed to the sun, or protected by a *close box*, or in a yard, are the least, and some of them but little hurt, of which I might give you many instances.

Believing this subject to be within the range of your society's investigations, I re-

commend it to your consideration, although it could have been more satisfactorily examined early in the summer, when the evidences which prove the views I have taken, could have been more clearly seen.

Very respectfully, yours, etc.,

THOMAS MCGECHIN.

DR. MOSHER, President Cin. Hort. Soc.

The committee rendered the following report on Saturday, October 16th:

*To the President and Members of the Cincinnati Horticultural Society.*

Your committee, to whom was referred the communication of Mr. Thomas McGechin, in reference to the destruction of the Paper Mulberry, *Broussonetia papyrifera*, have considered the matter, and beg to make the following report:

Trees and plants are seldom injured by the frost, sun, or the changes of temperature, in the climate of their nativity. It is where they are subjected to different climatic influences that they are liable to be unfavorably affected, and this is always in proportion to the violence of the change.

The idea of *acclimating* a plant, is altogether a *fallacy*. No change is ever effected by which a tree or plant is capacitated to endure a more rigorous temperature than in its original condition. If it were otherwise, the most *tender tropical* plants could, in process of time, be exposed to our severe winters without harm to them. It will not be pretended that this has ever been observed.

The Paper Mulberry is an *exotic*, a native of a more temperate zone than ours, and is therefore not capable of enduring the severity of our climate, without receiving more

or less harm, when the extremes of cold occur. If it were as hardy as our native trees, it would have fared like them under the circumstances. That it did not, after a residence here of half a century or more, proves the above position to be sound.

It is no doubt true, that "the early flowing of the sap in the spring, being checked by hard frost, which was followed by warm sun," was the cause of the destruction of such of the trees as had not been previously killed by the low temperature of the winter.

When the functions of the tree or plant are in active operation, with the sap-vessels filled, if suddenly congealed by frost, the natural consequence is, that the congealed sap is expanded until it bursts the fibers of the vessels. When in this condition, if exposed to the sun's rays, the mischief is completed by the sudden thawing and the consequent chemical change in the sap, by which its characters are altered, and from which death is the inevitable consequence. If the sun's rays are excluded from a tree or plant in the frozen condition, and the thawing be effected more slowly, the sap may not be very injuriously affected; and though the tree or plant have received harm, it is enabled, by the vital force remaining, to throw off the injury and soon resume its healthy action. This satisfactorily explains the reason why "those not so much exposed to the sun, or protected by a *close box*, or in a yard, are the least, and some of them but little hurt."

With due respect, your committee submit the above, and ask to be discharged.

A. H. ERNST,	} <i>Committee.</i>
JOHN LEA,	
M. KELLY,	

This report was on motion accepted, and then excited a very animated discussion, which was continued by adjournment, until Saturday, October 30, when the main prop-

osition of the report was amended by the addition of the words below in italics, and by changing the words "a fallacy" into *erroneous*. Thus: "The idea of acclimating *or changing the natural constitution* of a plant *or its offsets*, is altogether *erroneous*." With this amendment the report was adopted and the subject dismissed.

As this discussion has attracted considerable attention, it will be desirable to present some of the arguments advanced on both sides of the great question, or issue made upon the adoption of the report, the idea of *ACCLIMATION*. It may not be apparent to the reader that the Society has made any very great advance in knowledge, or that the members have finally arrived at a correct conclusion; but the discussion has elicited a good deal of thought, and caused considerable research; whether to the elimination of truth, remains to be seen. The large majority of the Society considered, that by the amended proposition of the report, they have set forth an axiom which will correct errors that have prevailed in this community, respecting the possibility of rendering tender southern plants, *hardy*.

In the course of the discussion, George Graham advanced that southern plants may be acclimated, and supported his views with forcible arguments, culled from botanical authors of high standing. He then referred to the peaches on the Alleghany mountains, where these trees, having become acclimated, endured severe, long continued cold, and ripened fine crops, as he could testify from personal enjoyment of them.

Mr. Graham objected to the report on account of its assertion of acclimation being a fallacy, which he considered untenable. He cited the history of the Fig, which had been carried from Italy to England, and was still living in Devonshire, and was larger than this tree grows in Italy. He admitted



that the situation was favorable. He quoted botanists who had given a wider range to some kinds of fruits. Towers stated that the Peach would grow from thirty to fifty degrees, but it might be grown in any latitude by seedlings which became inured, and would become hardy. He then cited Rev. Thomas Millner's Gallery of Nature, and read a very interesting quotation upon vegetable physiology; Towers was also quoted in reference to the Peach.

Mr. Foote claimed that there were *limits*, beyond which plants would not bear removal or change of climate, and that southern plants bear the change to the north better than northern plants to the south.

Mr. McAvoy thought there was no such thing as acclimating; he thought the Broussonettia in question, was killed by the freezing of the sap, and that they always would be subject to similar death under similar circumstances.

Mr. Anthony believed that man could overcome nature, and that plants might be acclimated; he referred to the Ailanthus as capable of acclimation everywhere.

Mr. Ernst thought nothing had been urged to prove the doctrine of acclimation—and proceeded very ably to advocate the opposite doctrine as contained in the report. He reminded the Society that the peach referred to as having been acclimated, was not a tropical plant.

Mr. Kelly thought that all plants had a certain power of adapting themselves to the circumstances around them, but he did not believe in the doctrine of acclimation, and thought it was attempted to prove the theory by very unfair data—without studying or regarding the laws of physical geography, and referred to many introduced plants that were first treated as hothouse subjects, and afterward discovered to be hardy. He did not know one plant, that was propagated by

division, which was more hardy than it was fifty years ago.

Mr. Bateham, of the Ohio Cultivator, confirmed the views of the report and knows of no plant becoming more hardy, unless, perhaps, sometimes a more hardy variety were grown from seed.

The President said that he had learned that the peach in Tampico retained its green leaves all winter, and no fruit buds were formed. He had grown the Black Hamburg grape for twenty-five years, and they were generally killed to the ground, and appeared no more hardy than at first.

Mr. Ferris asserted that some plants did become more hardy in peculiar situations, and that to a certain extent, plants did have the power of becoming more firm and resisting in their constitution and fiber.

To this it was answered that plants fostered and forced under the regimen of hothouse, were not in a condition to sustain a sudden exposure to the changes of a northern climate, and therefore, if a comparison were instituted between such, and others of the same kind that had been grown in the open air, the latter would undoubtedly appear more hardy.

The President suggested that the members should endeavor to understand the meaning of the term *acclimation*.

Mr. Ernst responded that it meant, becoming accustomed to a climate different from its own, and sustained his report by repeating that we can not change the character of the plant as an individual, whatever may be done by raising seedlings from it.

Mr. Buchanan thought it meant that a plant might be carried to a different latitude from that where it originated, and succeed well in its new home. He cited the Catawba Grape and Peach—he quoted the accounts of the Orange, which thrives better now in Louisiana than it did originally, but he

thought the original individual would not generally become more hardy, but that the only way to acclimate a plant was to do it by raising seedlings.

Mr. Jackson also thought that a plant could only be rendered more hardy by seedlings—except, perhaps the *Ailanthus*, which he found much more hardy now than it was originally.

Mr. Sleath thought no southern plant could be acclimated nor rendered more hardy than at first. He had found the seedling Cucumbers, Tomatos and other delicate plants were just as tender now as when they were first introduced.

Mr. C. G. Siewers wrote as follows to the Horticultural Society :

GENTLEMEN :—Some twenty years ago, the nurseries in Pennsylvania were doing a *land office* business with the Paper Mulberry, which business was, however, cut short by the severe cold of February, 1833, which destroyed them almost totally. Since then, this tree has been seldom recommended by nurserymen, and the last winter has again almost exterminated it. On examining the dead trees in the spring, the bark is found in whole or in part, burst off from the wood of the trunk, (the branches escaping with less damage,) and where the separation is only partial, the tree often recovers. This is no doubt caused by the expansion of the freezing sap and the unyielding nature of the bark of this tree.

I recollect some twenty large apricot trees that were nearly ruined in 1833, by the same cause. They had been budded on plum stocks, about six feet from the ground ; the apricot bark remained sound while the plum bark was very much torn and loosened. The *Ailanthus* doubtless escapes on account of its porous and expansive bark.

I believe that a tree cultivated on an elevation, will bear the same degree of cold,

better than one of the same kind grown on low ground ; but take a bud from the *apparently* acclimated peach-tree on the Alleghany mountain, and insert it into a tree at its base, and you will find that the virtues of the parent will *not* descend to its offspring. To acclimate a plant, it would be necessary to change its material, and if we can do that, we shall doubtless also have quite a different plant ; chemistry teaches that it only requires a different proportion of the same elements to produce something of a very opposite character.

October 22, 1852.

The Secretary, having been too much occupied in noting the rapid remarks of the many energetic speakers upon this wordy topic, begs to be allowed a corner now, to express his views quietly. He is disposed to sustain partially the propositions of the communication and those of the report also, believing them to be founded in the plainest common sense, and in the axioms of physics and physiology.

According to the latter, vegetable physiology, the warmth of spring, acting upon the terminal and other buds, the foci of the *vitality* of a tree, excites them into action, and they mysteriously send down word to the rootlets to open their mouths, *spongioles*; not only so, but they send the material to make new mouths, and thereby a supply of fluid is obtained from the moist earth to fill the vessels conveying the upward current or flow of sap. According to the former, *physics*, when the tree is in this condition, with its vessels distended with sap or fluid, susceptible to the action of freezing, if now it be subjected to one of those changes of temperature called late frosts, the natural result must be in accordance with the axioms referred to, that the fluids become solid, and expanding, burst the connections of the organs, to the manifest injury of the tree, and

as these vessels lie between the bark and the wood, the former, in severe, cases, will be reft from the latter. Now this will occur after a single night's frost, if the depression of the temperature have been considerable, just as readily as if the cold have been continued longer and not more extreme; for the injury depends upon a *previous* flow of sap.

True, the sunshine is always injurious in its action upon frozen succulent vegetation, and they will frequently recover, even very delicate plants, if they be thawed in the dark or under the earth. But it will not do to blame old Sol with all the damage, when it has been proved by the laws of physics that the action of the frost alone is sufficient to account for the injury in question; and its having been observed to occur most fatally "on the sunny side," may only indicate that the *previous* influence of the sunshine had enabled the roots on the warmer sides of the tree to respond to the call of the buds above, and send up the juices through the vessels on the side of the tree belonging to them. Hence, as these are not always exactly straight, but often tortuous, winding sometimes round the tree, so we find the loosened bark often inclined more or less in a spiral manner.

The greatest difficulty, in this as in many other similar discussions, has grown out of the want of a proper understanding of terms. *Acclimated* is a term borrowed from medical science, where its precise meaning is, according to the lexicographers, "habituated to a foreign climate, or a climate not native; or so far accustomed to a foreign climate as not to be peculiarly liable to its endemic diseases." Here, in its legitimate sphere, it appears to have no reference to temperature, but exclusively to disease. In our use of the word, however, we have applied it to a plant becoming accustomed to a lower or

higher degree of temperature than that incident to its natural habitat.

Now whether there be in plants any such power of accommodating themselves to surrounding circumstances not *native* to them, or to a climate the *means* or *extremes* of which differ materially from its own; is a very difficult question. The investigation involves a long and extensive series of observations, not only upon the individual plant in various localities, but, before this, we must have accurately ascertained the natural range of the species and variety under consideration; and it appears that this range is naturally very wide in certain plants.

The report has very wisely assumed that the use of the term acclimation, should be applied to an individual, and its offsets, not to any nor all of the *possible* varieties that shall spring from its *seed*, which may have been even fertilized by hardy plants of the same, or closely allied species—that would involve other questions.

This question of seedlings, though not now on the tapis, has been frequently alluded to in this discussion, and may be noticed *en passant*, for I think too much importance has been accorded to it, and, except by hybridation from a hardier specimen, I do not believe the probability of procuring one hardy seedling among ten thousand, from tender plants, would be worth calculating as a fraction of a chance. Look at the myriads of our herbaceous annuals that spring up in the seed beds, and as volunteers, they are as susceptible to the depressions of temperature now, as they were when first introduced from more genial and equable climes.

But enough has been said already; the honest and earnest chairman of the committee, evidently desired to set forth the *fallacy*, as he considers it, which has been advocated by some, respecting the *acclimation* of trees to the particular neighborhood where they

are grown. Whereas, difficulties referred to a want of acclimation are all explicable, much more satisfactorily, by reference to the exposure of a long journey, to bad growing, to bad packing, to an occasional freezing and drying while out of the ground, to a great change of soil, and *partly*, also, no doubt, to a higher or lower mean temperature, or to greater extremes in their new homes, than had been their wont.

Those who advocate the necessity of acclimating nursery stocks, certainly do a good and kind act to their neighbors, by receiving and nursing the far-brought trees, that are indeed too often in an unfit condition to bear the chances for life, presented them by field or orchard culture, but which, in a year or two of good care, become stout and well rooted, so as to be "*acclimated*" to the region where they are to be planted out.

This effect of frost upon vegetation appears to have attracted the attention of other observers, and among them, some of the most accurate and scientific in Europe. Dr. Lindley, who stands at the head of English Horticulture, has recently analyzed some of the statements of European naturalists, and his remarks and quotations furnish some passages which may be cited with advantage in this place. He says: \* "he was led to inquire into the exact manner in which the death of plants is caused by cold; very little, however, is to be learned upon this subject from the writings of physiologists. The common opinion is, that frost acts mechanically upon the tissue of plants by expanding the fluid they contain, and bursting the cells or vessels in which it is inclosed."

'Mr. Goeppert, of Breslau, denies that this supposed laceration of the vessels takes place, and attributes the death of plants solely to an extinction of vitality, followed by changes in the chemical composition of their juices.'

'Professor Morren, of Liege, also denies the statement as to bursting, and assigns the effect to other causes. He says that no

organ is torn by the action of frost, except in rare cases. That none of the elements of plants contained in the vegetable tissue undergo any alteration, except the starch, which is sometimes changed into sugar. That the dilation is chiefly owing to the separation of the air contained in the water. That this separation of air is the most injurious of all the phenomena attendant upon freezing, because gases are thus introduced into organs not intended to elaborate them, and bring about the first stages of the decomposition of the sap, so that with a thaw, a new chemical action commences, destructive of vegetable life. Water is also driven into the air-cells and air-vessels, so that the functions of organs are inverted, in a way to destroy the plants, even if death were not produced in frozen plants by the decomposition of their juices, the loss of their excitability and the chemical disturbance of all their contents.' "

The Professor's observations were made upon various plants, frozen at a temperature of from four to nine degrees below zero of Fahrenheit. In a frozen apple, he says, "the ice is not a continuous mass, but is made up of a multitude of little microscopic icicles. If we thaw them, it is seen that a large number of little air-bubbles are extricated from the juice of the fruit, which has there acquired new chemical properties. On examination, he found that each cell is filled with a small icicle, in the middle of which is a bubble of air; each cell is consequently expanded by freezing."

Professor Lindley adds, that "in plants easily killed by exposure to a similar degree of cold, he could not find the vesicles of cellular tissue separable from each other, even in the most succulent species, and concludes that this circumstance is not so much connected with the destruction of vegetable life, as a result produced upon the tissue by a great intensity of cold. He did find it lacerated in several instances, however, as if by the distension of the fluid it had contained. In a *Stapelia*, the whole cellular tissue was soft and deformed, as if it had been distended, with but little power of recovering itself again, and several large irregular lacerated cavities were observed. The same thing was noticed in other plants, but in no case did he find any kind of tissue ruptured, except the soft cellular dodecahedral or pris-

\* Condensed from the London Horticultural Society's Transactions.

These are sensible views of "*acclimation*," and from the highest authority.

The following Table of Analyses made by Professor Timmons and Dr. J. H. Salisbury, shows the composition of the ash of grain and straw of our most valuable Cereals, etc.—*Jour. U. S. Agr. Soc.*

HIVE SEEDS OF					STALK OF										
	Oats	Rye	Barley	Millet	Wheat	Indian Corn	Oats	Rye	Barley	Millet	Wheat	Indian Corn	Beans	Clover Hay	Timothy Hay
Dry matter, .....			87.84							48.65					89.70
Ash, .....			3.20	3.40	1.45	0.85				3.73	2.66				3.00
Phosphates, .....	30.70	3.45	22.53	44.30	4.30	1.80	24.45	49.47	70.00	53.75	75.75	59.65		0.33	41.85
Lime, .....	38.80	48.85	36.18	35.17	73.57	73.61	31.65	15.20	10.68	18.15	8.21	5.86		40.74	16.93
Magnesia, .....	0.22	0.28	0.57		0.01	0.10	6.05	2.13	0.08	0.40	1.05	4.50		30.95	0.20
Potash, .....	0.14	0.40	1.64		0.02	0.03	0.20	1.50	traces	0.43	0.25	0.86		3.97	0.50
Soda, .....	18.33	18.00	25.91	7.18	10.83	20.73	17.99	16.10	10.68	17.39	7.20	7.33		25.93	30.76
Sulphate of Sodium, .....	3.90	8.90	2.88	8.24	8.11	5.31	3.14	9.60	2.99	1.52	2.10	8.53		14.91	14.91
Sulphuric acid, .....															
Chlorine, .....	1.67	4.72	9.46	traces		0.71	12.57	0.90	5.73	2.50	2.21	4.88		5.43	0.49
Organic acid, .....	0.46	6.12	1.72	traces	1.34	0.10	0.49	0.50		0.51	0.24	2.66		1.84	4.13



## The Garden.

### ACHIMENES.

THE achimenes are a family of plants well adapted for decorating purposes. They are so accommodating in their season of flower, that, where you can have the command of a little fire heat, they may be had in flower the whole year round. I know of no other plant that gives a greater amount of pleasure to the lovers of Flora, than a huge mass of achimenes, suspended in a rustic basket, and in full bloom. Their pretty foliage, the delicacy of their flowers, and, above all, their richness of color, will always make them favorites.

The achimenes are natives of South America; they are produced from small scaly tubers, and grow from one to five feet high; they have opposite hairy leaves, from the axils of which they produce their flowers. The usual time of blooming is from early spring till the end of summer.

*Soil.*—The compost that I recommend is a mixture of rough, fibrous peat, and leaf mold, in equal proportions, mixing with them a little fine, clean sand, and some decayed sphagnum moss, chopped fine.

*Culture.*—About the early part of February, shake out the tubers from the pots in which they have been at rest, and plant them in pans placed in the stove, in order to start them; when they have attained the height of six or seven inches take some neat, clean pans, five or six inches deep, place a large piece of potsherd over the hole at the

bottom, fill it up to the height of one and a half inches with smaller pieces, put on a little moss, and then the compost; take out the plants with a small portion of soil adhering to their roots, taking care not to separate the tubers, and place them in the pans. Twelve plants are sufficient for a pan sixteen inches in diameter. Lay the plants down about one inch below the surface, leaving only about two inches of the top to be turned up perpendicularly, and secured to neat little stakes; water them freely without wetting the leaves, and never use the syringe; place the plants in the stove, where they will have a tolerably moist atmosphere, and a temperature ranging from seventy to eighty degrees, till they begin to flower; then remove them to a house that is a little cooler, to prolong their flowering. When the stems have done blooming, they naturally die down; the tubers are then stowed away in pots in a dry situation, until the time for planting them again returns.

*Propagation.*—Achimenes may be propagated by scales, leaves, or cuttings. First, by scales: take the tubers and rub the scales one from another; place them in a pan in a mixture of peat, leaf mold, and sand; and you will have as many plants as there were scales. Second, by leaves: choose nice, healthy leaves, separate them from the parent plant, make a clean transverse cut at the base of the petiole, stick their ends

into some fine clean sand, round the edge of a cutting pot; and in two weeks, if properly attended to, they will be rooted. Third, by cuttings of young wood, placed in the sand, and set in a close frame in a stove, or with a bell-glass over them.

THOMAS HUTCHINSON,

*Reading Road Nursery, Cincinnati, O.*

CINCINNATI, October 18, 1852.

#### Report of the Vegetable Committee.

*To the President and Members of the Cincinnati Horticultural Society:*

GENTLEMEN:—It was with pleasure your committee viewed the excellent display of vegetables at your late exhibition. We are all agreed in declaring it to be decidedly the best ever exhibited in your rooms.

In examining the quality of these vegetables, we were led to admire the skill and industry of our predecessors, who, by their care and labor, have produced such a valuable assortment of useful vegetables. Upon those who have succeeded them, and now fill their places, devolves the delightful privilege and duty of carrying forward this improvement. Had we time and room in this report, we should call attention to the primitive condition of our most esteemed vegetables.

At some future time, (if desirable to the society,) we will enter more fully into this subject, when we shall take up the list of plants now cultivated for food. We shall then learn what these plants once were, and what, by careful cultivation, they have now become. The size and weight of some of the best specimens that have been produced will be given.

Nearly all of our vegetables are the offspring of wild plants from the fields, ditches, and sea-shores—where, perhaps, others equally valuable remain, to be introduced and improved at some future period.

Much has already been done, but we believe much more may still be accomplished.

It is, in some cases, by contrast alone that we are enabled to perceive the full force, and the great and striking differences; and it is only by comparing what gardening and gardeners *were* a hundred years ago, that we are enabled to understand what they *are*, and what they may ultimately become. We are fully persuaded that the practice and progress of gardening has not been outrun by the onward course of any operative science whatever. The movement is still onward, and it is daily acquiring fresh energy and strength.

If, during the years that are past, the intelligence of gardeners has made such rapid strides, what may be expected now, in these days of horticultural magazines and reviews, when the facilities of acquiring and communicating knowledge and prosecuting improvements are increased a hundred-fold, and brought within the reach of all! If a taste for gardening, and some knowledge of its "mysteries" have been spread among those who are not its professors, but who have become its patrons, we may be led to expect that by the force of example the same spirit will become more or less infused into every class of society. The success of those who produced the magnificent specimens of vegetables which graced the tables of our last horticultural exhibition, no less than the admiration of those who visited our rooms on that occasion, can not be hidden under a bushel.

In gardening, not only are the treasures of beauty displayed, but the useful is also presented to view; and those economists or utilitarians who prefer what is tangible and practically useful, are brought under tribute to admire, as well as under deep obligation to those who, at our late exhibition, proved the boundless capabilities of improvement

to which our culinary vegetables are susceptible.

It would be unfair in your committee to make any further remarks on the quality of the various lots of vegetables. They were all, in our estimation, good, and our list of awards will show what are considered the best.

In conclusion, we hope to give general satisfaction to the numerous competitors, having endeavored faithfully to discharge the thankless duty imposed upon us.

Your committee are of opinion that your list of prizes, at your late show, was far too low for the articles exhibited in this department, and would recommend your next year's premium list to be a *little* more liberal. We should be neglectful in our duty, if we omitted to press this subject on your attention. Although we are not members of the Vegetarian Society, we wish the vegetables to maintain their proper standing in all societies professing to be horticultural.

We are, gentlemen, yours, etc.,

RICHARD DAVIES, *Chairman*.

[This report should have appeared in the account of the Fall Show, in last number, but was not prepared in time.]

### Beets.

#### FARMER'S CLUB, AMERICAN INSTITUTE.

On this subject the following facts were elicited. The beet is a native of the seacoast of the south of Europe, and takes its name from its seed vessel, which, when it swells in the soil, has the shape of the second letter of the Greek alphabet, *Beta*.

There are many kinds of beets now being cultivated. The leading sorts are the Early Blood turnip-rooted, the Long Blood, and the White Field, or Sugar Beet.

*Cultivation*.—If the planting be delayed till May or June, for the principal crop, the results will be better; for if stunted by early frosts, beets seldom recover the ill effects arising from such accident. For early use, however, the Early Turnip-rooted Blood may be sown in drills one-half inch deep, and eighteen inches apart, dropping the seed at

three inches apart in the drills; and in light ground they should be firmly rolled. As the seed vessel of the beet seed contains several seeds each, it is necessary, at the end of five or six weeks, to thin out the crop to six inches apart, leaving the stronger plants to perfect themselves. These early pullings are used as greens, and bring a high price in our markets.

They, in common with all beets, require a deep mellow soil, and if highly manured the previous year, will give better results than if specially manured at the time of planting the crop. Super-phosphate of lime and ammonia, add materially to the results of this crop. They should be kept clean from weeds, and the surface of the ground between the rows should be frequently disturbed. Market gardeners are now raising a kind of Long-blood beet, known by the various names of Rochester, Quaker, Lazyman's, Blood and Radish-rooted beet, as well as a variety of other names. It is inferior in quality to the true Long-blood beet, but is more regular in shape, smoother in surface, and grows eight or ten inches out of the ground, rendering it easy to pull, which probably gives it its more general name, Lazyman's beet. The White beet, in garden culture, is only esteemed for its stalks or mid-rib of the leaves, which, when free from the leafy part, is sometimes used in soups, or if peeled and stewed may be eaten as asparagus. Whyte's New Blood-beet and the London Blood beet, are both supposed by many to be improvements upon the Long-blood. The Silver Sea-kale beet somewhat resembles the White beet, its leafy ribs are larger, and has the flavor of Sea-kale when cooked.

The Sugar beet and Mangel-Wurzel are usually raised for cattle, and of which almost any amount per acre may be produced, by judicious manure. The Bassano beet is the best for family use, and is indeed a luxury as a vegetable; but its whitish or yellowish color, with a red tinge on the edge of its annular rings, render it unsightly on the table, and it will not sell in the market.—The Yellow Turnip-rooted beet is nearly or quite gone out of use. Of the commoner kinds of field beets, (Sugar beet and Mangel-Wurzel,) two thousand bushels have been raised to the acre, some of which weighed from fifteen to twenty pounds; and



it will be recollected that at a late meeting of the Farmer's Club, two beets from California were exhibited, one of which weighed sixty-four pounds.

As gardeners plant beets, they use at the rate of ten pounds of seed per acre, but for field culture, when distance is left to plow between the rows, half that quantity is sufficient. A pound of the seed measures about two quarts, and each capsule contains four or five seeds. About the end of October, the beets should be taken up, the leaves cut off within two inches of the crown, and the roots put away in a dry cellar. They may be kept out of doors, and even above the surface of the ground, by being sufficiently covered to protect them from frosts.

To obtain the seed, plant out the principal roots early in spring, rejecting those that are fibrous or ill-shaped. As a food for cows, beets are only second to carrots, causing them to give good supplies of milk, and of good flavor. For fattening cattle they are very serviceable, and should be alternated with carrots and other roots. They are sometimes fed to horses, being finely cut and mixed with dry feed, etc. Swine are fond of beets, and will fatten upon them. No dairyman or cattle breeder should be without this crop. A cow may be kept the year round on the beets raised from a quarter of an acre or less. The making of sugar from beets, so extensively practiced in France, can not be pursued in this country with profit. The prolific results of the sugar growers of Louisiana will probably forever prevent the making of sugar from beets in the United States.—*Work. Farmer.*

#### Oleanders and Glycine.—Queries.

DR. WARREN:—I have been in possession of two oleanders for three years; they are fine, thrifty, healthy shrubs; and yet when the buds attain the size of the branch I inclose, they drop off, and I have never had a flower. The roots have plenty of good earth, they are shifted every spring into new tubs, and well watered with manure water during the growing season. However, last summer they were transplanted into the garden, with a hope of success. The buds attained a larger size there, but dropped

without opening. The trees were the gift of a friend, and therefore I am sorry to part with them; and yet I am somewhat unwilling to cherish them longer, unless, like the barren "fig tree," their deficiency can be discovered and removed. I have had many varieties of plants, and succeeded well in flowering all, but these and a glycine. The latter has a western exposure, is planted in loose, rich soil, and in winter is usually killed back two-thirds of the last summer's growth; it has not bloomed, is four years old, and grows most rapidly. I have thought of removing it to a south window; but the catalogues place it among the hardy climbers, and I did not know but that it would become acclimated.

Can you suggest a remedy? The cause may be quite apparent to a gardener or florist more experienced than myself. It is a *problem* to me.

I am sorry to see so few communications from ladies in the Review. Are our lady florists all *mutes*? Speak!—some one—and we'll know. Yours, etc.,

NANCY ANNE SHEPHERD,

Ripley, Ohio.

REMARKS.—*Madame*: I thank you for presenting your troubles, and writing over your own signature; that is womanly.—Well do you ask why your sister gardeners and florists do not write more for me. They do it; but you have not detected them, deprived of their maiden signatures; others have been equally undiscerning. I value my female correspondents much, and trust they will continue to send in their favors, and signatures—whether with signatures of their own, or over names assumed for the printed page; but they must always expect to favor the editor with their legal cognomen.

I suppose you have cherished your oleanders too well, and fed them too bountifully,

for them to bloom. In studying the natural history of vegetables, we soon discover that with many, perhaps most plants, a state of excessive growth is not compatible with abundant bloom and fruiting. Grow your plants this year, and bloom them next year, and afterward, until they need new wood, is a good rule with many species, and the oleander, or *Nerium splendens*, is one of this class. You have probably nursed your plants into a vigorous growth of thrifty wood, by shifting them every year, and lastly by planting them out in the ground. Now, then, you will do well to set them in large pots or tubs—not too large, neither; trim them judiciously, and place them in a light cellar or cool room, where they will not freeze *too hard*—but where they may enjoy a perfect *rest* or hybernation; during which time they will need no watering, especially if the surface of the earth has been covered with some substance that will prevent the evaporation of the moisture contained in the soil.

When the genial influences of the spring have succeeded in overcoming the rude blasts of winter—when you feel satisfied that no more ice will be formed—take the plants out into a mild vernal shower, and dust them well with dry ashes; the lye will effectually cleanse the stems and leaves of the troublesome coccus, or scale insect, which often infests this plant. You may observe that the underside of the leaves is dirty; in which case be sure to place the plants upon their side, and dust well, so as to reach these parts with the ashes. This rain is a natural method of *syringing*—and for many things it will answer very well.

After this dressing, raise up your plants, and let them have a pretty good soaking of water—either from the skies, if they be propitious, or from the watering-pot, if April smiles on you.

In watering, observe the advice previously given on this subject; beware of too much moisture when the plant is dormant, and avoid frequent small applications, to the surface of the earth only, when it is growing. Watch against severe weather; or, if convenient, keep the plants in a sheltered porch, or before a sunny window, in a cool room. As the young shoots appear, (which should not be too early,) if you have not confidence in the strength of the soil, apply the manure water, largely diluted; but suspend its use so soon as the flower buds make their appearance, when you will simply keep up a proper moisture in the soil—allowing the plant plenty of air and sunshine.

As to the glycine, you must have patience, and will be obliged to practice a little craft. It, too, has evidently been a pet—if not with yourself, it has at least been a favored child of mother earth, and is disposed, in its youth, to lay a broad foundation for future grandeur.

The horizontal soft shoots of this plant are its favorite mode of increase in the loose, moist soils of our southern states; they are like runners, and strike root very freely. Your object is to have a fine flowering plant as soon as possible. To this end, select the finest shoot, train it upward from its groveling position—*make* it look upward—and with a sharp knife sacrifice all other efforts at growth. You may have the satisfaction of seeing this branch becoming stouter and stronger, when you may practice summer pruning, by pinching-in the end with your thumb and finger, about mid-summer. The result will be, the swelling of some of the axillary buds, which will branch out, or prepare for branching, next year. You will thus change the habit or condition of the plant, and will soon afterward find yourself possessed of a very

hardy, stocky, bushy plant, rather than a tender vine.

Now, do not imagine that your plant has been *acclimated*—for the “fallacy” of that doctrine you are referred to the Broussonnet discussion on pages 115 to 121. The glycine comes from a southern latitude, and this is probably near its northern limit on our meridian; it is therefore liable to injury here by cold, unless it has been accidentally or purposely brought into a hardened condition. When once established, it is a very hardy plant, which will delight you with its lovely flowers.

#### Green Asparagus, again.

DR. WARDER:—In your May number, I notice an article headed, “How to grow Asparagus;” likewise a discussion on the green and white varieties; to which I beg leave to offer my mite of information.—Twenty-seven years ago I lived at a situation near Bristol, England. My father-in-law lived at a little distance from me, also in the capacity of gardener. Having occasion to call upon him one day, I found he was cutting this vegetable for the family—what is termed “white asparagus” by some. After having done this, he then cut some “green asparagus” for his own family, about six or eight inches long, cutting it close to the ground. This was boiled in the usual way, and when served up was like a dish of marrow—no “blanched horn,” all eatable, and no bones left. I consider it equal to broccoli, and milder than forced sea-kale. Ever since that time I have recommended green asparagus in the situations at which I have lived, and it has always been preferred. I agree with some of my worthy friends at Cincinnati, that many of the market-going people would be prejudiced against it until they had given it a trial, and then I am persuaded they would buy no more white asparagus.

My mode of planting is nearly the same as that of William Cox, except as to the width of my beds; which I stake out at three feet six inches, and plant three rows in a bed at twelve inches between the rows, and twelve inches from plant to plant. The alleys are two feet six inches, and the outer rows are nine inches from the edge of the bed; the crown of the plant is not more than two inches below the surface. I prefer two year old plants, rather than one or three year old. I cease cutting by the 15th of June invariably, and never cut too hard.

There is a great advantage in using green asparagus, inasmuch as you need no asparagus knife to thrust down, and destroy hundreds of buds, which the most careful hand can not always avoid.

WILLIAM EVANS.

WALNUT HILLS, Ky.

[The propriety of wider planting, and the reasons therefor, have already been presented; but space is considered so essential to a good growth of this vegetable, that it is again urged upon all planters to use more ground in the culture of this delicious vegetable. Those who must have white stalks, but who wish them tender, are reminded of the plan pursued by Mr. Shoemaker—that of covering the beds with eight inches of spent tan after the fall dressing.—Ed. W. H. Rev.]

#### Winter Digging.

LET everybody who has a rod of ground for a garden—much more, those who wish to excel in their horticultural productions—recollect, that next to pure seed and good care, the proper preparation of the soil is most essential. One of the best methods of putting the soil in good condition, is to have it thoroughly dug in the autumn and thrown up to the action of the air and frost; for this comminution enables the earth to absorb the nutrient gases from the atmosphere and snow-water during the winter, and it is found fine and mellow in the spring.



## The Vineyard.

### VINEYARD CALENDAR FOR NOVEMBER AND DECEMBER.

OWING to a misunderstanding among the parties concerned, the reader was deprived of the excellent advice upon the subject of the vintage and wine-making, promised for the November number. Console yourself that it was too late to be rendered useful during this season, and be assured the subject will be incidentally brought up before the next grape harvest; and as that approaches, if "the Calendar" continues to gain favor in your eyes, full and precise directions will appear—probably in the last number of this volume.

At the close of the Calendar for October, you were told that little remained for the vine-dresser to do besides setting up the leaning stakes, and controlling the washings of the rains. Upon a careful consideration of the subject, however, the committee think it well to give directions at this time respecting the work which may or should be done in December.

After setting up the stakes, so that the winter storms may not throw them down and damage the vines, the next work is to draw the earth up about the stocks, especially where the roots have been washed bare of the soil; this will protect them from the direct effects of the cold, and also pre-

vent their liability to be heaved up by the frosts.

The bands should next be cut, so that snows will not break the vines, and also to allow them to dry readily after a rain, for the retention of moisture would be injurious.

In Europe many vine-dressers commence trimming their vineyards soon after harvesting the grapes, if the wood be perfectly ripe, for they consider that the vine would lose much of its sap if left until the warm weather in February, the season usually adopted for pruning. This is a matter in which we have not yet had much experience in this country, where the late winter pruning has been chiefly pursued. Some persons, however, have tried the experiment. One of the committee was induced to prune a part of his vines last autumn, and he can perceive no injurious effects, to say the least; and the fall cuttings, put directly into the ground, have grown admirably, and in larger proportion than usual.

*Young plants*, which are of a suitable size to be removed, or which are intended for sale, should be removed from the nursery in autumn, when the ground is in much better condition for their removal than it is in the spring. They may be tied up in

small bundles, say of twenty-five each, and either heeled in and nearly covered with soil, or set in sand in an airy cellar; in the latter situation they will be more accessible for pruning and shipping during the winter.

Fall planting of the vineyard, we believe, has not been practiced; but it is quite probable that it would possess many advantages over setting in the spring season, if the land have been prepared.

## Transactions.

### THE CINCINNATI HORTICULTURAL SOCIETY.

SINCE the autumnal exhibition of this society, there has been more spirit in the meetings than has been sometimes observed after the excitement of a great exhibition. The discussion of the Broussonettia's death, and the "acclimation" question, has attracted a large share of attention; besides which the tables have been liberally furnished with interesting fruits at every meeting. Mr. Cox exhibited some of the finest purple Broccoli that we have ever had presented, and for which the Secretary was very glad to have acknowledged his indebtedness, as he declares they proved quite as good as they were handsome—more than it would perhaps always be safe to assert of all untried beauties.

The largest fruit contributors were R. Buchanan and T. V. Peticolas. But we were also indebted to Dr. T. W. S. Cornett, of Versailles, Indiana, for some of the finest and largest specimens of Pryor's Red, Putnam Russet, and other choice varieties, we have ever seen—excelling even the beautiful fruits we have previously received from this amateur horticulturist. Our only regret was, that he did not himself accompany the fruit, and enlighten the society, by a description of his soil and mode of treatment. The pears and preserved cherries, from E. W. Carpenter, of Lancaster, Pa., were welcome presents, and gave great satisfaction. These interchanges are valuable.

The dahlias continued to reign the supreme glory of the autumnal gardens, until the morning of Nov. 8th, when the frost blackened them entirely. This plant has never bloomed more magnificently in our neighborhood. The autumnal rains and exemption from frost furnished the climatic

conditions in which they delight; for they often suffer, during midsummer, to such an extent that they can not recover before they are cut off by the early frosts while budding into beauty. The chrysanthemums have this year been very beautiful, and have attracted great and deserved admiration—especially with the stock of new Liliputian varieties added to the old sorts. The regular show day of these autumnal beauties was November 6; when a very handsome collection was brought together.

The awards of the flower committee are as follows:

#### REPORT OF THE FLOWER COMMITTEE.

##### *Chrysanthemums.*

For the best twelve, in pots, to John Sayers, \$3.00  
For the best specimen plant, 1.00  
For the best cut flowers, in single blooms, 2.00

For the Liliputian varieties of William Heaver, and a handsome stand of different kinds, in bunches, from John Sayers, honorable mention is made.

##### *Varieties Exhibited.*

William Heaver—Chrysanthemums, Liliputians; Bella Donna, Bernettianum, Empress, Sulphurea, Petit Coucet, Coronet, Henrietta Salvio, Mrs. Cope, Pomponne, Bijou, Madam Gondareau, Bouton De Venus, Titian, La Jongleur, Magnet, La Fiancée, Compactum, La Sapoule, Vulcan, Jaquite, Madam Jorgney, Queen, King, Arago, Sanguine, Park's Yellow, Competitor, William Penn, Rosetta, Temple of Solomon, Queen of the Gipsies, Conductor, Napoleon, Defiance, Pomponne or Daisy

varieties, *Metrocarioides*, *La Pactole*, *Pau-  
lidetto*.

John Sayers—*Chrysanthemums* in pots, *Pigault le Brun*, *Eclipse*, *Madame Gorney*, *King*, *Eliza Meillez* (new), *Petit Poucet*, *Vulcan*, *Competitor*, *Metrocaryoides* or *Bouton de Venus*, *Tasselled White*, *La Pactole*, *Prince de Conde*, *Queen of Gipsies*, *Madame Gondereau*.

*Cut Flowers*.—Besides the above varieties, *La Laperel*, *Purple Perfection*, *Adventure*, *Compacta*, *La Jingle*, *Queen*.

And the lists of those exhibited may be taken as a guide in the selection of varieties; though some others equally attractive were not exhibited, because they did not happen to be in good condition. Our own citizens, however, will have made themselves somewhat familiar with the most desirable kinds, for some hundred fine plants have met a ready sale from a single establishment, and probably as many more besides from other gardens and the market, which has often been quite gay with them, resembling the displays made in the spring.

Notwithstanding the efforts made by this praiseworthy institution to foster a refined taste, and to improve the character of the fruits, flowers and vegetables supplied to our citizens, (the success of which is manifestly apparent,) it is a discouraging fact that the exhibitions of the past year have not been patronized by the people in proportion to their deserts; the consequence of which has been a deficiency in the treasury. The excellent suggestions of the worthy chairman of the council, in his recent report, are worthy of consideration, and we hope that they may stimulate more and more of our citizens to come forward and contribute their means and support to a worthy object, which has done much to furnish refined comforts and luxuries to all. More members are wanted. Many more persons should unite, were it only to contribute their support in a good cause; but they may be assured that it will be a good investment to themselves, whether they ever plant a rose or not; and the satisfaction of aiding what is praiseworthy, is itself sufficient recompense.

**Lorain Horticultural Society.**

Welcome a younger sister in the garden. Glad are we all, to find others interested in

our favorite pursuits. Send along the accounts of your doings.

The officers elect for the following year are:

*President*—N. B. Gates, Elyria.

*Vice-President*—O. S. Wadsworth, Wellington.

*Treasurer and Secretary*—E. Matcham, Pittsfield.

*Managers*.—H. P. Sage, Huntington; A. H. Redington, Amherst; E. Byington, Elyria; E. Clark, Eaton; Wm. Day, Sheffield.

The committee on corn and root crops are requested to meet at Oberlin, on the first Monday in January, 1852.

#### **The American Wine Growers' Association**

Met by adjournment on Saturday, November 6th, at Masonic Hall.

A communication was received from the secretary of the Hermann Wine Fair, inclosing an account of that interesting occasion, and a vote of thanks was ordered to that officer for his attention. A very interesting discussion ensued relative to these wines.

The president introduced the communication of Mr. Longworth, respecting mashing of grapes, presented at the August meeting, and referred to a committee, of which he was a member. He reported that some grapes would not be benefited by fermenting on the skins, such need age to bring out their bouquet; others, as the *Catawba*, would have the peculiar flavor if fermented on the hulls; but if the fruit be perfectly ripe, this flavor will pass with the juice from the press.

Dr. Mosher thought aroma was much increased by thorough mashing and working of the pulp before pressing. After some further discussion the subject was dismissed.

A communication was read from Mr. Longworth, asking whether a deep, cold cellar, sufficiently ventilated, or a basement room, should be preferred for wines; in the former the fermentation would be slower.

The president stated that this subject had attracted much attention in Europe, among the best wine coopers and most renowned chemists. Baron Liebig had investigated the subject, and recommended that the wine should be treated like beer—fermented in large vats exposed to the air at common temperatures; but that experience had shown this plan was not the best, so that it appears

we can not always depend entirely upon the dicta of the chemists. The delicacy of the aroma is lost—this is not a character within the reach of the chemical tests. He thought that when he tried open fermentation he had not succeeded so well. Mr. Foote had observed that the chemist Chaptal had made similar mistakes.

Dr. Mosher considered the knowledge obtained from European authors very good, but we must learn from experience. He thought that he had observed that large casks were best, and a high temperature, say sixty degrees. The casks should be kept full, and so arranged with pressure or a safety tube terminating in a vessel of water, that the pomace should not be thrown off, and the violence of the action controlled. When the first fermentation was passed, the pomace settled to the bottom.

Mr. Rintz concurred in this; but had not observed that the wine was any better when the syphon tubes had been used.

Mr. Graham strongly recommended this plan, so as to exclude the oxygen of the air, which would have a tendency to produce acetic acid.

Mr. Rehfuß thought it would not be best to have the casks too large, on account of the great heat produced in fermentation; besides, the process would be too much hurried; and he thought the slower the fermentation the better, after the *first* motion.

In regard to the question of Mr. Longworth, Dr. Mosher cited an experiment in which the wine was fermented in forty gallon casks, the bungs closed with a grape leaf retained with a stone; the casks were kept in a close room above ground, temperature perhaps seventy degrees. The wine was quiet in ten days, and soon cleared; his own wine was kept in a common cellar. He had some that froze severely.

Mr. Rintz used a common cellar, where his wine was received from the press in casks of eight hundred gallons capacity.

Mr. Rehfuß had used different cellars, deep and shallow. Where wine froze and thawed, he thought it was changed; perhaps this caused the ethereal character sometimes observed. A member mentioned the very similar effects upon some vegetable products, produced by heat and cold equally.

Mr. Brace said that cold only suspended the fermentation, which would again act;

but that if subjected to heat, the ferment would be destroyed.

This and other matters were freely discussed by the members; when the president drew attention to samples, as follows:

No. 1, Catawba, 1851, no special manure, high colored, not yet quite clear.

No. 2, Catawba, 1851, manured, lighter color, milder, more matured, and much admired; all consider it a better wine.

No. 3, Catawba, 1852, no manure, higher colored, roughish.

No. 4, Catawba, 1852, manured, paler color, already much milder than the other.

These are both *new* wines, it should be recollected, and have the fermentive taste upon them still.

The president explained that these different wines of each year were all produced in similar soil and situation, except as to the manure applied, and had been treated in all respects in the same manner; but that all depended upon the chemical effects produced by the special manures applied to the *vines*, and that they operated in the growing grapes and wood, produced a different fruit, which, being differently constituted as to its elements, would necessarily produce a different result in the *wine*. He stated the effect of the alkaline manures to be the change of the malic acid of the green grapes into tartaric acid in the ripe; the latter, being insoluble in alcoholic mixtures, was precipitated from the wine; whereas the malic acid, if not transformed, continued to give an acidulous character to the wine.—He had calculated that forty or fifty pounds of potash were taken up by the grapes on one acre of ground annually; this substance is not abundant in our soils, and must therefore be added as a special manure.

On motion, adjourned to the regular meeting on Saturday, 27th November.

#### Pennsylvania State Fair.

From the Lancaster Examiner, kindly loaned by a friend, I have been able to see a list of the entries, and also of the awards, made at the recent exhibition.

Each list represents an extended interest in the success of the institution, which is creditable to the citizens of the Key-stone State.

Vegetables, fruits, flowers, and wines,

appear to have attracted, as usual, a large share of attention.

The newspaper, being filled with politics, contains a very short notice of the fair, from which it appears that the attendance was very good. "Taken as a whole, it was highly satisfactory to the visitors, as well as to the society."

As is very naturally the case, the larger proportions of entries were made by those residing in the immediate neighborhood of the fair. This is one of the strongest arguments in favor of the movable fairs, adopted by some states.

#### Wisconsin State Fair.

From the *Wisconsin Farmer* it appears that the citizens of our young northern neighbor have had a good time of it while holding their second State Fair, near Milwaukee. The display was highly creditable to the state, and to the taste and skill of those who contributed to the exhibition.—The show passed off well; the weather favorable; the concourse of people large.

From the editor's account of it, there appears to have been some dissatisfaction; but such things are to be expected in a new enterprise of this kind. The inhabitants are the right sort of people to encourage and support this kind of institution for the diffusion of knowledge, and they are fortunate in having an officer of whom all speak well. This is a great point gained; and it is hoped the labors and efficiency of Albert Ingham, Secretary, will be justly appreciated.

Agricultural implements, as might be expected from the emigrants of New York, were prominent articles among the entries. Plows, cultivators, drills, etc., were there; and the Automaton Reaper and Raker, that queer thing from Chicago, which has attracted much attention and excited wonder wherever exhibited, since its first appearance in the New York trial at Geneva, last July.

The collection of fruit was a very attractive feature of the fair. Among the exhibitors were F. K. Phoenix, of Delevan; John Bell, of Gardner's Prairie; and Orra Martin, of Spring Valley—from either of whom I shall be glad to hear more of the fruits of this young state.

#### The Maryland State Fair.

THE agricultural State Fair has been doing well. The number of visitors on the ground at one time was estimated at forty thousand. The city is inundated with visitors. The annual address was delivered by B. P. Johnson, of New York, which is a sufficient assurance that the good people of Maryland have heard a great many things worth remembering, and some that they can not forget. Mr. Johnson is one who would stir them up to good deeds in the cause of agricultural improvement, if indeed they were not already on the highway to preferment among the sister societies. This association have fine ground and permanent fixtures for their fairs, near the city of Baltimore.

What a pity that so many of our fairs must, unavoidably, clash with one another!

Indiana, Maryland and Georgia were rejoicing simultaneously this year.

#### Fair of the American Institute.

THIS institution held its great fair during the month of October, at Castle Garden.—The horticultural department is the most extensive of the season, and presents every known variety of fruits that can be exhibited at this time. The machine department is full of novelties—labor-saving machines of every sort and kind; improved agricultural tools, entirely too numerous to be referred to even in classes. Among these, we may name a machine for picking up stones and potatoes while passing over the surface of the ground, drawn by one or two horses. The potato crop is thoroughly gathered and deposited in a box, cleaned and free from soil, no one tuber ever escaping the action of the machine. When the box is full it empties itself, and the operation again proceeds.—Small stones may be gathered by this machine, and the surface of the ground rendered as free from them as if it had been sieved. The operation of picking up these stones, secures a very perfect disintegration of the immediate surface-soil.

The usefulness of this institution is to be seen in all parts of our country. The number of scions, grafts, etc., and superior class of seed distributed by the *Farmers' Club*, during a series of twenty years, has improved the contents of the New York markets, and certainly doubled their value as to



quality. The vegetables exhibited at this fair are generally free from hybridation, and true to their sorts.—*Working Farmer.*

#### The Richland County Agricultural Society

HELD their third annual fair on the 14th and 15th days of October, when a very creditable and extensive list of awards was made.

It is well that some of our county societies begin to appreciate the merits of FRUITS and FLOWERS as useful accessories in their shows. Here is a part of their report, which does credit to the chairman. This appears to have been appreciated by the society, as they have elected him president; and a good one he will doubtless make. May we meet at Columbus, on the 8th proximo. I want to know him. Horticultural interests will be safe with him, I trow.

"The committee on fruit have the gratification to report that the exhibition of fruits was of the best kinds and quality for the season, and most of them, having been gathered from the orchards of our farmers, very creditable to that part of the community. At the same time we would not underrate the advantages derived by the farmers from the nurserymen and gardeners. The apples would bear comparison with any that we ever saw; the grapes were fair and fine; the quinces splendid; and those butter pears beautiful and delicious. On the whole, we think that old Pomona has had an especial regard for our taste and fancy; and Bacchus, too, in his liquorish glee, has not forsaken us, as was demonstrated by the fine wine presented by Mr. McIntyre, pressed from the Catawba grape.

'With the fruits and the wine,  
The gods have combined  
To give us a glorious feast.'

"And a feast indeed it was, not to the taste alone, but truly so to the optic and mental vision. It must be highly gratifying to every citizen to witness improvements in our country in the culture of fruit. In taking a retrospective view of the past, and contrasting it with the present, and the bright prospects of the future, we seem in the morning of our existence, to have but just emerged from the dark shade of a gloomy forest, to approach the effulgent light of a meridian sun, then to retire in the

evening of our days to the quiet recesses of our orchards, and vine-clad bowers, where we may spend our latter days under our own vine and fig-tree. Where is the drone in the great hive of human intellect, that will say, 'I have spent my time in vain;' or where is the mind so unrefined, or the soul so morbid, as not to feel a sense of gratitude to Him who tempers the clime and the seasons to the production of the fruit of the earth?

HUGH GAMBLE, *Chairman.*"

#### The Western Poultry Association.

OPENED their great annual exhibition at the spacious Masonic Hall, on Tuesday, November 9th. A numerous display of the feathered tribes made their appearance in the assembly, not to be led off in the dance, but, like some other folks who go to a crowd, *to see and be seen.*

The interest in this branch of rural affairs has been evidently on the increase in this part of the country, since there were two hundred entries, embracing birds of varying degree and pedigree. A committee of learned lookers-on was appointed to decide upon their various merits; and they had, no doubt, a tiresome time of it. But, all for science! The world will be wiser and happier for their immense efforts—*doubtless* (no)—*full.*

#### The Northern Ohio Poultry Society,

HELD their first exhibition, at Ravenna, November 4th and 5th. It is said to have been a fine affair, well feathered; and though there may have been few *feather votes* cast in that region, it can not be doubted that many a man who witnessed the sales of *chickens* would be glad of an opportunity to *feather* his nest in a similar way, if he had only been *stocked* with the fancy articles in demand.

#### Tea Culture.

DR. JUNIUS SMITH, of Greenville, South Carolina, has procured a new supply of tea seed from China. He feels encouraged in his efforts to continue the culture of this "Celestial" plant in the United States.

Success attend you, Doctor!

## Editorial.

### VARIOUS ITEMS.

#### The State Board of Agriculture,

Will hold its annual meeting at Columbus, Ohio, December 8, when the delegates from county societies will meet to elect new members in the places of those whose term of office expires, viz:

ALLEN TRIMBLE, of Highland county ;  
 ARTHUR WATTS, of Ross "  
 J. G. GRET, of Green "  
 C. SPRINGER, of Muskingum "  
 J. M. EDWARDS, of Mahoning "

The following hold over another year :

S. MEDARY, of Franklin county ;  
 M. L. SULLIVANT, " "  
 WM. CASE, of Cuyahoga "  
 PHILO ADAMS, of Erie "  
 R. W. MUSGRAVE, of Crawford "

The delegates to this convention, or electoral college, as it might be correctly styled, have a *legal* duty to perform, in filling these vacancies, which, it is sincerely hoped, will not be a mere *form* of an election. It has been well suggested, by a correspondent of the *Ohio Cultivator*, that nominations should be made some time beforehand, that those interested in having a good Board might have an opportunity of becoming acquainted with the fitness of the candidates for this important office. This were well ! For the honor of Ohio agriculturists, let it never be said, that the delegates were used as mere tools to deposit prepared ballots—they should come qualified to vote advisedly, and the nominations should be made without any tricks or caucuses.

The delegates have also other duties to perform. Coming from distant points, and representing almost every county in our broad domain, they should spend a large portion of the time in consultations for the pub-

lic good, and in the discussion of some of the topics that should interest, and which do deeply concern the great agricultural interests of the state.

Our neighboring state, Indiana, has even gone so far as to consider the delegates to their elective convention as members of the board for the period of their session, during which they are entitled to all the privileges of full members. This is more than is asked in Ohio ; rather let the members of the state board come into the primary assembly, to unite in the discussions and to hear directly from the delegates of the people their wants, preferred by those chosen to represent them.

#### Illinois State Agricultural Society.

It has often been asked, when this giant among the western farming states intended to rouse up, and step into rank with the progressive movement, that has been so popular and so useful among the other states. She is stirring now. Michigan, Indiana, Wisconsin, almost Iowa and Kentucky, have acted in this united manner. Completely surrounded by the movement, the ferment is working, and all will rejoice to see it announced, as it has been in the *Prairie Farmer*, that delegates from county societies are invited to meet at Springfield at the opening of the session of the legislature.

#### Frontispiece.

THE subject—The Saint Catharine Plum—is chosen to illustrate the article from the pen of M. ANDRÉ LEROY, the pomologist, of Angers, France ; who has also favored the readers of the Review with notices of some Pears, to appear in January.

**Industrial College—Illinois.**

IN the August issue of the *Prairie Farmer* is a long account of the proceedings of the convention that recently met at Springfield, Illinois, to discuss the propositions of Professor J. B. Turner and others. The report is thus introduced by the president, Dr. Kennicott, an able and ardent supporter of the project. The proceedings will be published in pamphlet form when a copy will be welcome. An adjourned meeting is advertised to be held at Chicago on the 24th of November. Success to the project that advocates the diffusion of knowledge among the masses!—Ed.

*Messrs. Editors:*—I missed seeing you on my return from our "Industrial Convention;" and for fear you may not see the published accounts, (none of them very full, or very correct, either) I cut the inclosed partly from the *Illinois Journal* and partly from the *Ottawa Free Trader*, as I deemed these portions nearer a fair report, than either, taken separately as a whole. I send also an editorial in *Illinois Journal*, which gives a very fair representation of the true state of the case. The convention (as some writers and talkers have said) was not a very "harmonious" one; but there was not the least difference of opinion expressed by the legitimate members thereof. All the difficulty and all the opposition came from the able and learned delegation of the old colleges. These gentlemen were admitted as members at my instance, and they were certainly no friends to our new movement, and opposed it with zeal and ability throughout; though every one agreed with us, that the producer should be educated for his vocation, but they hold that the old colleges could accomplish this desirable result better than a new institution. While we *unanimously* went for a new school, on new principles and in new hands, to suit this new thought of educating hand-workers as well as head-workers, "in the knowledge of things next to them," and place the brain that conceives and directs, in the same body that furnishes the *hands* to execute the devices of the mind. But I may give you more on this subject hereafter.

**Impressions of the West.**

PROFESSOR J. J. MAPES, of New York, the able editor of the *Working Farmer*, so often quoted and referred to in these pages, delivered an address at the recent state fair in Cleveland, Ohio, portions of which from the brief newspaper report have been laid aside for republication.

In the meantime, read what were his impressions of our country and its productions as he reports them in his paper for October. Speaking of the gathering and exhibition at Cleveland, he says:—

This was the best state fair we have ever seen. The grounds were extensive; the buildings, instead of being mere shanties, were arranged tastefully, and were sufficiently extensive for the full accommodation of visitors. The citizens of Cleveland entered most spiritedly into the affair, and their houses were thrown open for the accommodation of visitors. . . . We must acknowledge that at every turn we were disappointed, and most agreeably so. We had viewed Ohio through a telescope of twenty years ago. . . . The display would have done credit to any fair in any country. The show of cattle was by far the most extensive we have ever seen. The Floral and Horticultural departments were full and effective. The miscellaneous department was not deficient in a single article to be found in the exhibitions nearer the Atlantic seaports. The dairy and farm products were of fine quality, with the exception, perhaps, as noted in our remarks on the State Fair at Utica, almost all the vegetables being hybrids, and not true to their sorts.

The display of new seedling potatoes gives promise that with or without the current disease we should still have a supply, from the introduction of new and undeteriorated sorts.

Our address was listened to by an audience of two thousand persons; but as it will be published by the society, we defer its repetition here.

Cleveland is indeed an anomaly to a New Yorker. Here is a city occupying a space which within our memory was surrounded by a deep forest, and which enjoys at this

time a mercantile position equal to any other city of its size in the world. The amount of transportable merchandise received and shipped from Cleveland, is greater in proportion to its number of inhabitants, than in any city of the United States. The immense trade of the lakes can scarcely be conceived by eastern men. In tons and value, the amount transported upon these lakes is greater than the total amount of import and export from all foreign countries to our Atlantic cities. The amount of tonnage employed in its transportation is not so great, because the voyages are shorter. But a single one of the mammoth steam-boats of Lake Erie transports a larger amount and value of merchandise per year than any line of foreign packets.

There is an air of solidity about everything connected with western farming, that delights the smaller operator visiting them from the East. The large farms, the liberal appliances, the fine condition of working cattle, the entire absence of *picayuneism*, are truly delightful. It is true that the modes of culture are not of the best kind, but the liberal scale on which the operations are carried on, is very pleasing.

The impressions received on Lake Erie, when he did not sleep more than half the night, will not do to set forth in this work. Were they as agreeable as those he imparted to another?

#### Western Literary Association.

A CIRCULAR to the friends of Western literature has been received, from which the following has been condensed.

A meeting was held in the city of Cleveland, September 24th, to take into consideration the propriety and practicability of organizing a WESTERN LITERARY ASSOCIATION. The sentiments of the meeting being unanimously in favor of the project, it was agreed that a convention should be called at the city of Cleveland, on the *second Wednesday of December next*.

This circular is signed by some of the most intelligent and best educated men of our state, and it is sincerely hoped a hearty response will be rendered to the call.

#### A New Publication.

It appears by a circular received from Detroit, that a new paper is to be published in that city, to commence in January, 1853, and to be issued on the first day of each succeeding month. It is to be entitled *THE FARMER'S COMPANION AND HORTICULTURAL GAZETTE*. The corps editorial, Charles Fox and Charles Betts, with Linus Cone as corresponding editor, and J. C. Holmes in the Horticultural Department, will be a guaranty that it will be a valuable periodical.

Fifty cents per annum is all that is asked, for sixteen large pages of good reading.

Go on in your enterprise—may you be well encouraged in the production of a valuable family paper.

#### Another New Rural Paper.

IN the *Cultivator* is found a prospectus from Mr. Tucker, of a new weekly paper to be called "*The Country Gentleman—a Journal for the Farm, the Garden and the Fireside.*" Mr. Tucker tells us that this is not a new project, but has been contemplated for many years. His long established reputation, and known ability as the conductor of the *Cultivator* and publisher of the *Horticulturist*, will be a sufficient assurance that this periodical will be valuable.

It is to be prepared in the best style, illustrated, and to contain twelve quarto pages in each number. Terms, \$2.00 a year, in advance.

The *Cultivator*, well known and much admired, is reduced in price to fifty cents.

#### The Horticulturist for 1853.

IN the *Genesee Farmer* for November, there appears a prospectus for the next volume of this sterling work, to commence with January, when Mr. Vick, the present proprietor, will issue it from Rochester. The services of Mr. P. Barry have been secured

as its editor, and we are promised several improvements in the appearance and embellishments of the work, while at the same time, it is to be furnished at a reduced price, except when the colored plates are called for, in which case the price will be \$4.00.

It were a work of supererogation to speak of Mr. Barry. As the great nurseryman, his name is familiar to all who plant trees, and as a writer, to all the numerous readers of the *Genesee Farmer*, he is known as its active horticultural editor. His work on fruits is also a familiar object to pomological readers. Happy, happy Mr. Vick!

#### The Farm of B. V. French.

In the *Norfolk Democrat*, there appears a very interesting and somewhat laudatory account of the farm of this well known Eastern pomologist and friend of agriculture, at Braintree, Massachusetts.

The descriptions of his crop, stock, orchards, nurseries and gardens, are just what would be expected by those who have had the pleasure of meeting Mr. F. in public, and known the energy with which he has practiced the domestic and rural arts. His extensive display of fruits at the recent meeting of the American Pomological Society at Philadelphia, was an object of universal admiration.

#### Meetings for Next Fall.

A list of the great and little convocations of Agriculturists and Horticulturists for the next season is presented in this number. In some, the dates are not filled up, because it was impossible to obtain them. If those interested in the societies will return the dates, and correct mistakes, they will oblige me much. The list, with emendations and additions, will be kept on the second page of the advertising sheet during the year, as a convenient reference. Let all the different prominent societies endeavor to make their

appointments for next autumn, in such a way as not to interfere with one-another, so far at least as this is practicable.

#### Horticultural and Agricultural Meetings.

National Agricultural, at Washington, D. C., February 2, 1853.

Met. Mech. Inst., Washington, Feb. 24, 1853.

Convention of Delegates and State B. of Agriculture, at Columbus, O., Dec. 8, 1852.

New York State Agricultural Society, Winter Meeting, at Albany, Jan. 6, 1853.

Ex. Com. of same, at Albany, on the first Thursday of every month.

American Institute, in New York, —

Indiana S. B. of Agriculture and Delegates, at Indianapolis, on Thurs., Jan. 6, 1853.

Illinois Convention of Agriculturists, to form a State Board or Society, Dec. 1852.

Cincinnati Horticultural Society, every Saturday, in Masonic Hall, at 10 A. M.

Monthly, first Saturday of each month.

Annual and election, January 1, 1853.

American Wine Growers' Association, on the last Saturday of each month.

Annual and election, January 29, 1853.

Massachusetts Horticultural Society, every Saturday morning, 38 School St., Boston.

New York Horticultural Society, every week, at Stuyvesant Institute.

Pennsylvania Horticultural, Philadelphia, on the second Tuesday of every month.

Pomological Society, at Boston, Oct. 1854.

Ohio Pomolog., at Columbus, Jan. 11, 1853.

North-Western Fruit Growers', at Chicago, Illinois, October 4 to 7, 1853.

#### "Industrial Education."

DR. KENNICOTT is again out in the *Prairie Farmer* upon this favorite topic, which he styles *specific practical education for the hand-worker as well as the head-worker*.

It is indeed a hard battle to fight, this against the school-men, who are the "iss,"

and as elsewhere, the occupants of public funds for instruction. But it is hardest to contend against the admitted ignorance of the very sect for whose special benefit the whole movement is made—the agriculturists themselves.

The plan suggested is an admirable one, and with true republican spirit, it is proposed to endow the institution, so that it shall be like an advanced grade of the common schools, free and open to all.

The third convention to consider this topic, first brought before the people by Professor J. B. Turner, will be held at Chicago, at the close of the month of November.

#### Specimen Fruits.

Mr friends in every neighborhood, will confer a favor by sending specimens of fruits for examination. They should always be carefully hand-picked, without bruising, nicely packed, so that they can not roll about in the box or other package, and marked with all the names by which they are known. This may be done best by marking the fruit with a number, and writing out the corresponding names on paper, especially if there be several sorts in the package, as I hope there will be frequently.

I take pleasure in acknowledging the receipt of several specimens, which have afforded me great satisfaction.

#### A Profitable Vine.

There is in the city of Dayton a grape-vine, which is standing beside a well, over which it is trained on an arbor; well trained, no doubt, well trimmed too, and in every way well cared for by its excellent owner, Mr. A. M. Clark.

Besides those used by the family, fifty dollars have been received by the owner this year, from the sale of the surplus produce of this one grape-vine, at three dollars per bushel.

#### A New Work on Fruits,

ESPECIALLY *Western* fruits, will shortly be announced. F. R. Elliott has long been preparing materials for a work on fruits, that shall be applicable to the wants of the West, and he has been most diligently occupied in the pursuit, taking drawings and copious notes. He has been a prominent member and active participant in all the pomological movements of the state and country; and has but now returned from the meeting of fruit growers at Dixon, Illinois, where he found a glorious display of Western fruits, in great variety and beauty, and where he has met and consulted Dr. Kennicott and other leading pomologists.

He will have the benefit of the consultations and assistance of that sterling pomologist, Professor J. P. Kirtland, whose efforts in this pleasant pursuit have given a reputation to Cleveland. Besides these advantages, he has the promised aid of most of the best fruit growers in our own state.

The collections of winter fruits he has succeeded in making this season, are extensive, and will give him an admirable opportunity for comparison.

Success to the undertaking; the more we can have this kind of information diffused, the better; for the people are lamentably deficient in sound knowledge of fruits, and are obliged to depend upon the advice of nurserymen, too often little better informed.

#### Apples Wanted.

ATTENTION of cultivators is especially directed to the caption above. *New, rare and old* varieties of fruit are always most gladly received by the Editor of this magazine, who has paid much attention to the fruits of the country, but is aware that there may be many excellent varieties, especially of apples, that should be better known and more widely disseminated. All who have a de-

sire to favor him, are urged to send specimens to him, especially seedlings, with a concise description and history, and all the names by which they are known in the neighborhood. They should be carefully packed, so as not to bruise. Let all such persons remember the meeting of the POMOLOGICAL SOCIETY at Columbus, in January, (11th,) and send or bring their fruits forward by that time.

#### Large Sale of Nursery Trees.

IN consequence of the death of one of the brothers Sigerson, extensive nurserymen near Saint Louis, Missouri, their stock has been offered at public sale.

Mr. S. was beloved by all who knew him, and his knowledge of fruits will make his loss seriously felt in Missouri.

E. H. Deming is agent for private sales.

#### Acknowledgments.

MY kind friends still continue to place me under obligations for their cherished favors, to which it is meet to submit gracefully, though it is not in the power of all, unfortunately, to receive *graciously*. The beautiful basket of golden apples from M. McWilliams, rival those of Hesperides; while those from M. Kelly and J. B. Thomas, of a more ruddy hue, were equally acceptable. The cut flowers from Mrs. Heaver and Gabriel Sleath, constituted the attraction of the parlor while they lasted, and their places have since been supplied by the beautiful chrysanthemums, favorite winter window-plants, furnished by John Sayers.

To my unseen friend, Chester Root, of Mobile, I am sincerely obliged for samples of his rich grape juice, from the Scuppernong; and also gratified to receive some of the premium wines from the recent fair at Hermann, Missouri, with an account of that interesting occasion, sent by one of the Secretaries.

#### McAvoy's Superior.

THIS fine strawberry is favorably noticed by G. W. Huntsman, a celebrated strawberry man at Flushing, Long Island, in an article on this fruit in the Horticulturist:—

"Vigorous and productive, fruit large rich and juicy. *One of our very best varieties*, though it will not, I think, quite equal Hovey's in size, but then it is *much superior in quality*."

This, from the East too, is quite refreshing to us who have watched this fine fruit since its first crop.

#### A New Feature.

THE Editor is but too happy in being able to promise the reader a suite of articles something in the style, perhaps, of those by Jeffries, in the Horticulturist, or a sort of *review of the Review*, which will appear from time to time as circumstances seem to demand. The name of the author is to be a profound secret, nor is the *assumpsit* over which the pieces will appear, yet known even, by the Editor. Look out for something spicy occasionally, for the cloak of an assumed name sometimes renders a man very saucy; but all may be assured that the editorial care shall be extended over all alike, who contribute to these columns, and the new comer shall not plume his wings too saucily, nor wound with his critic spur.

#### NOTICES.

##### American Pomological Society.

THIS National Society, having held a most interesting session in Philadelphia, on the 13th and 14th of September, ultimo, it is pleasant to see the result of its labors, handsomely printed by the committee and issued thus early. The pamphlet or book contains one hundred and sixty-eight pages, upon which will be found much valuable matter. To those who were not present, the very natural inquiry will be, What was done?

This may be most satisfactorily answered by reference to pages 20 to 49, upon which the discussions on fruits will chiefly appear; upon page 44 will be found the report of the committee on native fruits. On pages 52 to 57, the Society's lists: "for general cultivation; new varieties that promise well, and rejected fruits," will be found revised to the close of the session. Then follow the state reports, many of which are filled with valuable information, especially for the inhabitants of the districts for which they were written, but much also of a generally interesting and scientific nature. The close of the book is occupied by the very eloquent eulogy of the President, M. P. Wilder, upon the lamented A. J. Downing.

The whole preparation of the book is creditable to the committee, except, perhaps, that as it is a *book*, and not a mere pamphlet, and as it contains a great variety of matter, to which reference is to be made frequently, the reader should have been favored with an index, or at least a table of contents, to aid him in his search for the topic to which he wishes to refer.

With regard to the late meeting it may be said, that the universal feeling was that of agreeable disappointment in the fruits, and in the pleasure arising from the convocation of those similarly occupied and interested; the only regret connected with the meeting was, that it was too short, and all parted with a hope, that if spared until October, 1854, we should go to Boston prepared to be profitably detained for a longer period.

During the sessions of the Society, I was too much of an invalid to participate in the active operations, but was an interested observer, and was enabled to obtain much valuable information from the many intelligent persons present from various parts of our widely extended country. May we all have the pleasure of another profitable com-

mingling of spirits and interchange of knowledge—but, alas! when we consider the uncertain tenure by which we retain our places upon earth, the question must arise to each, how few of us may be spared to another meeting!

#### Annals of Science.

HERE is a bis-monthly, hailing from what some call the *Athens of Ohio*, on account of great mental efforts made and making by her citizens. The place is better known, however, as the Forest City.

This periodical is conducted by Professor Hamilton L. Smith, A.M., and purports to be a record of inventions and improvements in applied science, embracing the departments of Agriculture, Physics, Manufactures, Chemistry, Astronomy, Physiology, Geology, Photography, etc.

Science is a very good thing for those who can afford the luxury, we are told. Take care! the day is fast coming when you can not *afford* to do without it in any department of the arts. *Applied science* is the watchword. Without application, indeed, of what use is it in the practical details of life?

In his prospectus, the editor sets forth, that having made arrangements to receive regularly the various foreign and American journals named below, he proposes to issue a semi-monthly periodical of 16 pages large 8vo, containing an abstract of all the recent discoveries and improvements in every branch of science, and science applied to art, up to the time of the issue, and reprinting entire such practical papers as may be considered of particular importance, thus furnishing the practical man with information at the earliest period. Original papers of value will also appear. The volume at the end of the year will be very valuable. The subscription price, paid in advance, is \$1.00 per year—to clubs at reduced rates.

The first number has been received, and



contains a great many interesting and valuable papers and extracts. The second has since come, and sustains its high character.

While thinking of Cleveland and its Athenian reputation, let all concerned recollect, that the *American Association for the Advancement of Science* will hold their meeting in that city next August.

#### Buffalo Horticultural Society's Report.

THIS pamphlet puts us *en rapport* with our brother horticulturists of the Queen City of the Lakes, from whom we have had frequent intimations of progress through the notices of their meetings, kindly furnished for these pages by their devoted Secretary, J. B. Eaton, himself a pomologist of no slender acquirements, as he has enjoyed the advantages of his father's earlier planting, besides the neighboring genial influences of the nurseries of Col. Hodge and A. Bryant, near which he resides in a beautiful cottage surrounded with choice fruit trees.

This pamphlet contains the constitution of the Society, their doings for the year 1851, and their prize list for this season. They also give a catalogue of the officers and of the members, and a list of the fruits exhibited during the year is appended, which shows that their exhibitions are not meager.

The committee of publication represent the Society as being in a flourishing and healthy condition. In their report, they allude to some developments and discoveries made by the members, which may lead to useful results.

#### Cultivation and Manufacture of Flax.

MR. CLAUSSEN, of Flax-Cotton notoriety, is not to have it all his own way, how admirable and wonderful soever that may be. That great desideratum of the passing age, the spinning of flax by machinery, appears in these latter days to have been fairly obtained, if not accomplished. One of our

own citizens has invented an apparatus which he says is successful, but he needs capital to carry it into profitable operation.

To the kindness of a friend I am indebted for a pamphlet upon the subject, which has been carefully prepared, for distribution by Hacker, Lea & Co., of Philadelphia. It is concise, but at the same time comprehensive, and will, no doubt, prove useful, except that as it is for private circulation only, it may not be so extensively useful as though it were widely disseminated. The flax culture is a very important branch of industry in the United States; since the seventh census indicates the amount to be 13,391,416 lbs. of lint, and 552,810 bushels of seed. This pamphlet is commended to the editors of agricultural papers, who will find in it much that would benefit their readers.

#### The Ohio Journal of Education.

THIS neat and excellent periodical has reached its twelfth number. A new volume will commence with the year, when its extensive subscription list may be doubled, if the teachers and friends of education do but act their duty. This is essentially the teacher's periodical, and is filled with the most valuable information and suggestions to all engaged in schools.

#### The Tropical Farmer.

THIS spirited little monthly, to which the reader's attention was called on a previous occasion, has made its appearance again, in the third number; the 4th is due and expected daily, to bring us news from the flowery peninsula. *Florida!* the very name sounds gratefully to one's ears, when the wintry blasts are howling around our northern abodes. One new-year's day I gathered roses in its gardens, and wild flowers in its hammocks, where vegetation, in some form, seemed perennial.

The editor deserves and should receive encouragement, and appears to have the support of a good corps of correspondents; from some of whom, and from Lewis himself, we shall receive the desired news of tropical vegetation, fresh from the virgin soil. I am sorry to hear of Dr. Perrine's fate; he it was who first directed my attention to tropical plants in that region.

Would that I had "a thousand friends in Florida;" for then, like my friend King, of the Journal of Agriculture, I should say to all, "Subscribe for the Farmer, and the Western Horticultural Review into the bargain."

#### The Alabama Planter,

From Mobile, has recently made us a few visits that have been most welcome. It contains many articles upon agricultural subjects, well written, and well selected for the latitude in which it circulates. Having spent a winter in the state of Alabama, I am well aware that, with her charming climate and fertile soil, there is room for improvement in the agriculture of many of the planters. Attention is now encouragingly turned to fruits and vines, in some places.

In the last number, just received, there is a pretty full account of the recent fair at Macon, Georgia; which is represented to have been very a creditable exhibition of the productions of the southern states. This must be quite encouraging to those who have long seen the necessity of providing something besides cotton. My friend Peters' example is seen to be praiseworthy, and others are induced to procure fine stock and superior implements, and to adopt a different routine than corn and cotton. His situation, however, may be peculiarly adapted to farming rather than mere planting, and thus enable him to pursue a more varied course. The upper counties of Georgia are well adapted for the successful application of almost any system of culture.

*Bulletin of the Central Horticultural Society of Seine-Inferieure, (France,) second volume of Pomology.* Rouen.

THIS is a pamphlet of 135 pages, published under the auspices of one of the leading societies of France. It contains an alphabetical and analytical catalogue of different varieties of Pears, arranged in the order of their ripening, and followed by a general alphabetical list of the fruits described.

The work bears an impress of authority by having the name of M. Tongard, President of the society, prefixed as its author. In his dedication "To the Members of the Society," he acknowledges their aid in preparing the work, which is the result of many years' observation.

The great advantage to be derived from such a catalogue, prepared by those who have carefully noted the quality and period of ripening of different fruits, will be very apparent when we consider the frequent result with those who have not this knowledge, and who, hearing of several fruits that are excellent, purchase them, and when they bear, find several ripening at the same period. The nurserymen themselves are not always informed—indeed, very seldom are they qualified to aid the purchaser—in this respect: hence the value of the work becomes apparent. I have consulted its pages with pleasure and profit.

#### CORRESPONDENCE.

##### Late Apple Blossoms.

A FRIEND in Bloomington, Ind., writes as follows, respecting the condition of the fruit of that region. His suggestion respecting the deficient vitality of the late crop of flower buds—those which escaped the late spring frosts and were left to furnish the partial crop—is worthy of consideration. A short crop, however, always appears to be more

wormy, and to be suffering more from the rot, than a full and abundant one.

"We have few apples here, and those few rotting. Same last year. What is the cause of this premature decay? Injury from frost? or weakness in vital powers of the bud producing them, being the last bloom? In low situations, many apple-trees were killed by last winter, and in all situations many peach-trees. Some kinds of grafted apples proved more hardy than others; but seedlings more so than the grafted. Hope to see you at our State Fair.

Respectfully, yours, etc.

LEWIS BOLLMAN."

#### Pear Blight—Queries.

A CORRESPONDENT asks for a list of pears and apples that have been observed to be most obnoxious to the *Fire Blight*. Also, whether the disease is *infectious*.

I have endeavored to procure the desired information by conversation with many persons, and have a list commenced; but desire all readers of this work to favor me with any reliable observations they may have made or collected, so that the whole may be incorporated and presented to the public.

There appears to be some reason to suspect infection, but the fact is not by any means established.

#### Letters from France.

MR. J. A. WARDER, at Cincinnati:—I beg you to excuse me if I have not sooner answered your very honored letter of May 15th. But a long journey and much business has prevented my earlier attention thereto. I am happy to have a moment today.

I have the greatest pleasure in furnishing some articles on horticultural subjects for your very excellent journal. But I have

not time enough to write much. I now send an article and picture on the subject of Saint Catharine plum, and the outline and description of three choice pears. I also sent some articles to the Pomological Congress at Philadelphia, on the Mahonia, Fertile Currant, Cherry Currant, True Service Tree, etc.

I should be very happy to make your acquaintance; and if I revisit your country, I shall certainly pay you my visit.

I also send you my supplementary Catalogue for 1852.

I am, very respectfully, yours,

ANDRÉ LEROY, *Desportes*.

ANGERS, (France,) September 24th, 1852.

The outlines and description referred to above are in process of preparation for the press. The blocks will be cut in time for the next number of the Review.—ED.

*Extracts from a letter of M. Tougard, President of the Central Horticultural Society of Seine-Inferieure, etc., Rouen, France.*

[AFTER speaking in the most highly complimentary manner of the Western Horticultural Review, and the advancement we are making in the delightful pursuit of horticulture, he adds:]

Our society has noticed your articles with the greatest interest, and has enjoyed a genuine pleasure in listening to their translations. Placed in the center of the United States, your Review informs us of many new and curious things about which we wish to hear, and which can not fail to be useful to all concerned in horticultural science.

This national correspondence and interchange of ideas enables us to acquire a more perfect knowledge of our art. I congratulate you upon your work. If I can be of any service to you in France, you have but to command my services. . . .

We have had a terrible spring, with continual rains and late frosts, so that we have

no fruit. The pears and peaches have failed. We have some plums. The summer was very hot and dry, so that we have a splendid harvest. Grass, rye, and oats are very fine. Potatoes much affected still with the disease.

I send you the Bulletin of our Society, and catalogues of my fruit trees, which I commend to your attention, as among my lists you will find all the newest and best varieties of trees, which are confidently re-

commended to yourself and to your friends. In sending an order, if the bill is large, only ten per cent. of the amount is demanded, which should be sent in the shape of a draft on a Paris banker.

Yours, etc.,

*The President, TOUGARD.*

The Bulletin is noticed on another page; but the Catalogues have not been received, or they should have been noted and shown to the nurserymen.—Ed.

### METEOROLOGICAL TABLE.

CINCINNATI, OCTOBER, 1852.

THERMOM.			WEATHER.			RAIN	Date.	WINDS, ETC.
Date.	Min.	Max.	Sunrise.	Noon.	Sunset.			
1	57	79	clear ....	variable ..	cloudy ..	....	1	Calm, light S.
2	62	81	fog, clear.	clear ....	variable ..	....	2	Calm, light S.
3	65	80	clear ....	do. ....	cloudy ..	....	3	Calm, light S.
4	64	73	rain, cl'dy	do. ....	variable ..	15	4	Calm, light E.
5	58	75	clear ....	do. ....	clear ....	....	5	Light SW.
6	63	73	rain, var.	cloudy ..	var., rain.	30	6	Calm, light SW., brisk SW.
7	72	84	variable ..	clear ....	clear ....	....	7	Light SW., brisk S.
8	71	86	clear ....	do. ....	do. ....	....	8	Light SW., brisk SW.
9	71	82	do. ....	variable ..	rain, ...	35	9	Light SW., brisk S., light S.
10	63	71	variable ..	clear ....	clear ....	....	10	Light W. and NW.
11	52	72	fog, clear.	do. ....	do. ....	....	11	Calm, light SE., light SW.
12	60	61	cloudy ...	do. ....	do. ....	....	12	Calm, light NW.
13	42	61	clear ....	do. ....	do. ....	....	13	Light E. and N., calm.
14	47	60	rain var.	do. ....	do. ....	05	14	Calm, light SE., and SW. and W.
15	41	57	clear ....	do. ....	do. ....	....	15	Light NW. and W.
16	38	62	do. ....	do. ....	do. ....	....	16	Light W.
17	52	65	cloudy ...	variable ..	do. ....	....	17	Light SE. and SW.
18	57	80	clear ....	clear ....	do. ....	....	18	Calm, hazy, light S., brisk SW.
19	53	66	do. ....	do. ....	do. ....	....	19	Light N.
20	44	71	fog, clear.	do. ....	do. ....	....	20	Calm, light NE. and SE., calm.
21	49	77	clear ....	do. ....	do. ....	....	21	Calm, light SW.
22	58	62	cloudy ...	do. ....	do. ....	....	22	Light N.
23	43	62	fog, clear	do. ....	do. ....	....	23	Calm, light SE.
24	40	64	do. ....	do. ....	do. ....	....	24	Calm, light N. and variable.
25	40	70	do. ....	do. ....	do. ....	....	25	Calm, calm.
26	50	69	cloudy ...	variable ..	cloudy ..	....	26	Calm, light SE.
27	61	66	rain ....	do. ....	do. ....	1-20	27	Light SE.
28	61	74	clear ....	clear ....	clear ....	....	28	Light SE.
29	64	69	rain ....	variable ..	cloudy ..	15	29	Brisk SE., high SE., light SE.
30	63	68	rain, clear	do. ....	do. ....	55	30	Calm, light W.
31	54	57	cloudy ...	do. ....	do. ....	....	31	Light W. and NW., calm at night.
Inches, 2-75							Mean temperature of the month..... 63-70	
Clear days in the month..... 14							do. do. October, 1851,..... 55-06	
Variable—sun visible, ..... 17							do. do. do. 1850,..... 54-63	
Cloudy—sun not visible, ..... 00							do. do. do. 1849,..... 55-04	
							do. do. do. 1848,..... 56-04	
							do. do. do. 1847,..... 55-33	
							do. do. do. 1846,..... 54-81	
							do. do. do. 1845,..... 56-43	
							Mean temperature of the above 8 months, ..... 56-29	
							Lowest temp., 38. Highest temp., 86. Range, 48.	
							31 Mean of the min., 57-07. Mean of the max., 70-07.	

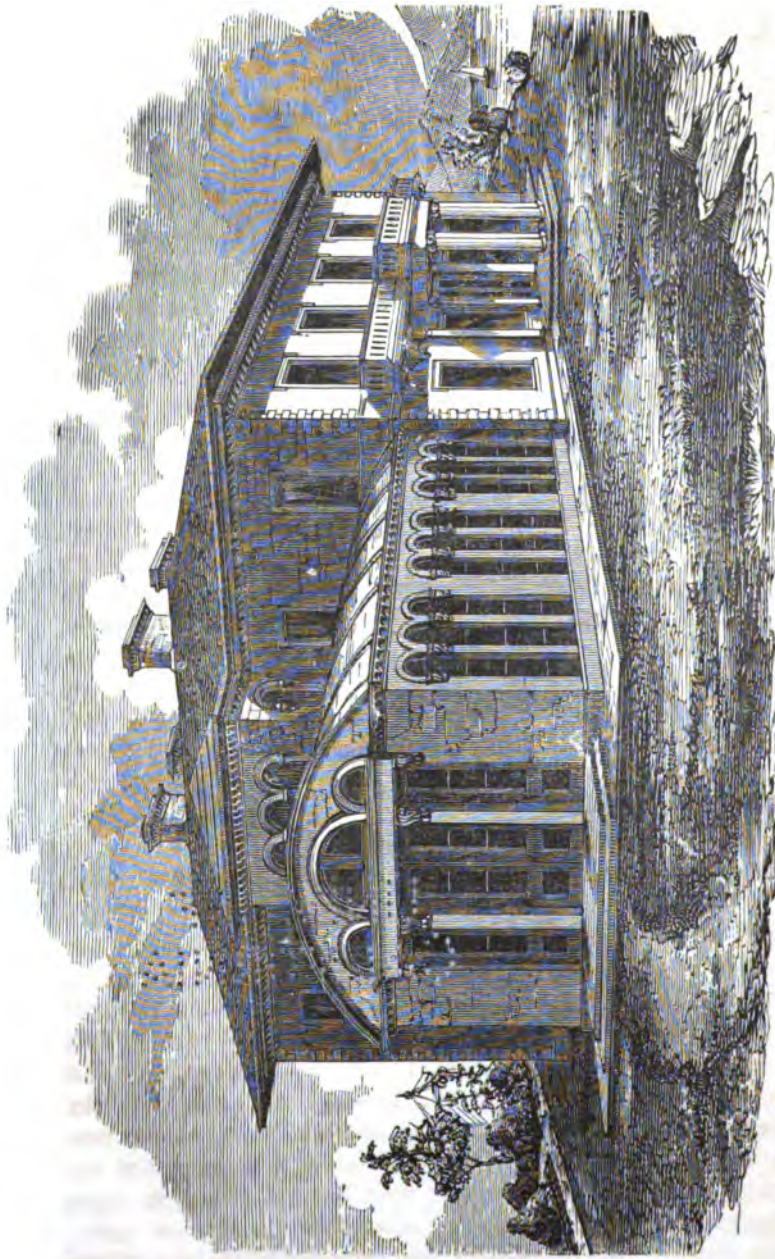
#### REMARKS.

This is the warmest October that I have recorded in fifteen years, and is 6°-83 above the mean temperature of this month for the last eight years. October, 1841, was of a mean temperature of 47°-50, being the cold-

est October I have ever recorded. A remarkably pleasant month, no day without sunshine, and no storm. Rain less than the usual average.

JOHN LEA.

UNIV. OF  
CALIFORNIA



Mayfield House,  
COUNTY WATERFORD, IRELAND.  
RESIDENCE OF JOSEPH MALCOMSON.

E. F. PETICOLA, Sc.

TINSLEY & SON, Arch'ts.



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Vol. III.

JANUARY, 1853.

No. 4.

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## Miscellaneous.

### NEW-YEAR.

ANOTHER year has revolved upon the ceaselessly turning axis of restless time—and we are again arrived at a point whence to take a position, be it only on the wings of Time, and look forward into the dim future, if perchance an encouraging ray of hope will but illumine the prospect of our pathway in that direction. But, as we may ever learn of the future by scanning the past, which in its flight failed not to make its mark upon our memories, let us look back to trace the events of the past year, whence we may draw instruction.

The Horticultural and Pomological, as well as all the other departments of the great congeries of agricultural interests, have reason to be thankful for an increasingly awakened interest in their success, whether we consider our whole continent as an empire, the several distinct states, or the counties and minor subdivisions and societies.

The *National* meetings in Washington last June, at Philadelphia in September, and the American Institute in October; the district meetings in the North-west, at Dixon

and at Rock Island; the various state associations from Maine to Iowa, and from Canada to Georgia, as well as the hundreds of county and town gatherings, have abundantly indicated by their convocation, as well as in their results, that the people of these United States begin to realize that their industrial occupations and the persons who are engaged therein, are really a worthy element in the success of all great national movements, and that they, deserving, should be awarded a due share of the attention of every government.

Now, I prithee, do not start astonished, my timid and domestic gardener friend, who hath never looked beyond thy own garden gate, within the precincts of which thou hast grown selfish and abstracted. Nor thou, who brushest the sweat from thy brow, when restricted to the labors conducted within the narrow confines of thy own little farm domain, working as vigorously as a vociferous lawyer or speaker, when engaged in the august presence of a common village magistrate, en-



deavoring to save or convict some hapless fellow-being. Nay, start not at the bare mention of the existing consociation of various branches of industry and science, under the great family of agricultural interests—they are associated and must be associated—each must lean on each—the special decisions of local interests in local societies to the contrary notwithstanding.

Agriculture is the great generic term—its subdivisions are Pomology, Horticulture, and also Mechanism, especially as it is directed to the perfection of the various processes to be performed by each department, and without whose aid they would indeed be rude in their performances.

Looking back through the vista of the past year, this mutual dependence, it will be found, has been almost universally acknowledged, and the various subdivisions of the agricultural and rural interests are working together in the most beautiful harmony. It has been well asked, where does Agriculture end and Horticulture begin? and with the extension of the latter, more refined pursuit, while we may rejoice to observe the rapidly increasing attention paid to scientific applications in the former, this question will be more and more frequently asked, and will become more difficult to answer. Truly this is cheering to both, and their acknowledged union will accelerate their mutual improvement.

Pomology has attracted and received a full share of attention during the past year, and some very important state, district and national meetings have been held—which will have contributed their full share in extending a correct knowledge of new fruits, and still more, a refined taste respecting the excellent varieties.

During the past year, the losses of the devoted friends of Horticulture and of scientific Agriculture have been sad and al-

most irreparable. The elegant and accomplished devotee to Rural Arts and Rural Taste, the lamented Downing, has been prematurely cut off in the midst of his useful career, by the sacrifices which our traveling community are unwisely making to speed, at the risk of safety. The brilliant and devotedly industrious chemist, John P. Norton, well known to all readers of modern agricultural papers, the writer of a prize essay on Applied Chemistry, and essayist upon various allied topics, editor of Johnson's Agriculture—the beloved and admired expounder of nature's laws, has sunk beneath a disease, which has perhaps been accelerated by the pursuits in which he was engaged.

These sad results must teach us the uncertainty of human affairs, and that as we can not always expect to enjoy the adulation of our fellow-men, we should aspire after a higher meed of praise than they have to confer.

Looking forward, as well as we may be enabled to do, down the vista of time occupied by the short period of the year now opening, we see much to cheer and encourage us. Pomological meetings are promised at various points in the present winter, and the great North-west will collect in Chicago in October next. State Boards, at home, to the east, to the west, and to the south of us will convene, and in some, at least, valuable discussions will be held, besides the mere details of business. The great National Society will assemble in Washington City on February 2d, proximo; and with the return of Spring and its flowery smiles, the various horticultural societies all over the country will again revivify into active existence. Look forward, then, and confidently anticipate progress, in the right direction!

One word to and of our fellow-periodicals.



—The Magazine of Horticulture is much more entitled to the rank of venerable, than its worthy editor and conductor, who, with very extended experience, is sufficiently young and devotedly a student, to continue his useful trials and experiments, recording for our use the results of his observations. Of the Horticulturist, every person felt that with the loss of Downing, its ruling spirit, it must fall—for “who could fill his place?” But we need never despair, since two such men as Vick and Barry have stepped forward to compensate for our loss. We are promised an improved appearance and quality of the work—with James Vick, the experienced and energetic publisher, and with P. Barry, the thorough and scientific nurseryman, with extensive observations from foreign travel, and possessing good preparation for his business in a thorough knowledge of Botany and Vegetable Physiology, and practical observation in the nursery, garden and orchard, we can not fail to find a work of great value and beautiful appearance.

The Philadelphia Florist, as indicated by its title, is devoted to a more limited range than either of the greater works just named; it is, however, useful in the line of its duty, and should become high authority if properly supported by the gardeners, who have given to Philadelphia and its environs an enviable notoriety in Floriculture. New York has her *Gardeners' Chronicle*—would that it were more American in its title. It is conducted by two practical, hard-working gardeners, who alternate from their labors at the potting bench, to those in the compositors' room, a small frame within the inclosure of Cremorne Gardens. These industrious men deserve all credit for their efforts. In the same city, it is said that Mr. Munn, who has formerly aided in the preparation of the Horticulturist, proposes commencing a periodical upon our favorite

branch; he is said to be very competent to the office.

It appears, then, that without considering the host of agricultural papers that abound in the country, in all of which we find a horticultural department, there are, with this western devotee, six serials of greater or less importance, devoted to the cause of disseminating news and intelligence and practical information among the reading rural population, enabling them to cultivate and beautify the homestead, and thereby to contribute to the happiness of thousands who may be met by this channel. Do not apprehend too many papers—the more the better—for the readers, at least, and perhaps for the publishers too, eventually; each has its influence, and each may be able to strike some chord that would not vibrate to the touch of the others.

#### Advantages of Fairs—Improvements— Draining.

EXTRACTS from an address delivered at the Ohio State Fair, at Cleveland, by Professor J. J. Mapes, editor of the *Working Farmer*, consulting agriculturist, etc., etc.:

To farmers, the benefits arising from fairs are incalculable; farmers are not a migratory race; their vocations require them at home, and therefore improvements which occur in one township or county, may remain unknown for a century to adjoining counties. There is scarcely a state in the Union, in which one or more farmers have not succeeded in producing one hundred bushels of shelled corn per acre, and still millions of acres of similar soils continue to be improperly worked and to produce forty bushels, or less, per acre. The fairs and the press alone can remedy this evil. By visiting fairs farmers are brought in contact with farmers, an interchange of facts occur, improved specimens of crops, of stock, etc., are seen, and each individual returns home emulated to surpass his neighbor.

Seeds undergo hybridation and deterioration of quality, unless occasionally moved to a new locality. At fairs interchanges

of seeds occur, scions, grafts, and cuttings are exchanged, and any new fruit seen by the horticulturist induces its introduction into some new district. Addresses are delivered occasionally to the advantage of the listeners, new implements are invented, and these, if of approved kinds, are introduced for general use. Labor-saving machinery does much to the advantage of the farmer; indeed, it often causes a difference of profit equal to that required to change a losing into a gaining business.

In relation to the improvements in agriculture, which have transpired within the last few years, the speaker stated that they were greater than during all previous time; that the iron plowshare was introduced but eighty years ago, and then in so rude a shape, that ten plowmen of its time, with a corresponding number of teams, would be required to perform the labor now readily performed by one. As to the importance of agriculture generally, he observed that a thousand millions of human beings were supported by it; that nine-tenths of all the available capital in the world, was engaged in its exercise; that despite the highly vaunted powers of the merchant, he was but the factor or broker of the farmer, and the success of his agency was entirely dependent upon the amount of agricultural product. Our Indian corn crop of 1850 was estimated at 600,000,000 of bushels, worth at the export value of the year, \$300,000,000; and this only one of several crops, nearly or quite equal to it in value. So great is the sum total, that a saving of the half of one per cent. would be greater than the present income of the government from duties on imports, sales of public lands, etc.

The two greatest agricultural improvements of the age are under-draining and subsoil plowing. Draining can be rendered a source of great profit; wet lands can not be tilled; the mechanical disintegration, arising from plowing such lands, remains but for a short time; soil when wetted to saturation will settle more solidly after the lubrication of its ultimate particles by water than from any known means of mechanical compression; soluble manures are wasted in subsoils; the chemical changes dependent upon the free and frequent circulation of the atmosphere are arrested; indeed moist

soils are not arable until properly under-drained, nor are all the advantages arising from the use of under-drains dependent upon getting rid of an excess of water; the very hill tops are benefited by such treatment, and this benefit will be more fully illustrated when discussing the advantages of subsoil plowing.

The best proof, however, of the advantages arising from under-draining, and the most practical in its character, is to be found in the action of the British government on this subject. They have appointed commissioners of under-drainage, and have appropriated £7,000,000, equal to \$35,000,000, to be loaned on under-draining mortgages; these liens are of a peculiar character. It was long since ascertained that most lands, by their being under-drained would increase the profit of the operator each year at least fourteen per cent. upon the cost of the under-drainage; and therefore to induce the farmers to adopt this practice more generally the government became a party to the practice; the farm is first valued, and the first object of the mortgage is to state the value; the loan is then made, to be expended in under-draining, on the following terms: the borrower pays five per cent., and five per cent. of the principal each year during the continuance of the mortgage, until at the end of twenty years the mortgage is discharged. Should the borrower fail to pay one of these annual amounts, and the mortgage be foreclosed, he first receives from the proceeds of sale the value of his farm, and the excess of receipt alone beyond this value is liable to the mortgage. So certain has been the benefit, however, that no farm has failed to be increased in value by under-draining, more than its cost.

The next most important improvement is the use of the subsoil plow. Wet lands are not improved by subsoiling until after having been under-drained. The subsoil plow does not turn over the soil like a surface plow; it follows the surface plow, and is propelled by a separate team, the beam lying on the bottom of the surface furrow, and disintegrates without elevating the subsoil.

The admission of atmosphere freely circulating through this subsoil, secures the chemical changes dependent upon its presence, and enables the surface plowing to be

gradually deepened; but this is not all the benefits arising from subsoil plowing. The roots are permitted to pass down and receive the constituents of plants resident in the subsoil, and to carry them to the surface to complete the vegetable organism. In times of drought the roots may pass down for moisture, and in times of excessive rains part of the roots at least will not be drowned out.

The greatest benefit however is that thoroughly under-drained and subsoiled land never suffers from drought. The reason is obvious, and may be thus explained: You will perceive the pitcher in front of me is covered, on its outside, with drops of water. These, you will readily understand, could not have passed through the pitcher. But as the temperature of the pitcher is colder than that of the surrounding atmosphere, it has condensed upon its surface the moisture of the atmosphere; for in the hottest day in summer, the absence of moisture from the soil merely goes to prove its existence in the atmosphere, and when the heated air containing moisture passes through under-drains, or down into subsoil cuts, it deposits its moisture upon the cold surfaces of the particles of the subsoils, and thus protects the roots from suffering by drought. Corn never rolls its leaves on thoroughly drained and subsoiled lands.

#### *Sylva Americana.*

DOCTOR WARDER:—The development of a taste for ornamental gardening throughout our country, has brought about a crisis, in which the unexpected appearance of the new edition of Michaux's *American Sylva*, in three volumes, translated by John J. Smith, together with three additional volumes by Nuttall, is most opportune.

A review of this useful and splendid work I shall leave to some abler hand, and shall only congratulate our Western friends, who take an interest in cultivating ornamental and useful trees from our forests, that they have now at command a perfect Guide-Book.

It should find its way into the library of every wealthy and intelligent farmer.

Hundreds of heads of families in the vicinity of Cincinnati, could in no wise confer a greater benefit upon their domestic circles than by offering a set of these volumes as a new-year's present.

Very truly, yours,

JARED P. KIRTLAND.

EAST ROCKPORT, Cuyahoga County, Nov. 30, 1852.

#### *The Potato Disease.*

THIS is a subject of so much obscurity that it is approached doubtingly—so much has been written upon it, and at last so little is known, that it is indeed "like the cholera," in being beyond our present ken—though like it, perhaps, in nothing else. Not having seen the secretary Walker's paper, I copy from the *Rural New Yorker*.—Ed.

The legislature of Massachusetts, in the year 1851, offered a prize of \$10,000 to any one who should satisfy the governor and council, that by a test of at least five successive years, he had discovered a sure remedy for the potato rot. Several communications have been received on the subject, which are published by the authority of the legislature, of which we reprint the following summary by Hon. Amasa Walker, Secretary of State:

Although these communications may not furnish any perfect cure for the potato disease, yet they agree in so many important points, and offer so many valuable hints, relating to the nature, cultivation, preservation and improvement of the potato, that they can not fail to be of great public utility. The similarity of views expressed by the most intelligent and experienced writers, relating to the nature, cultivation, disease, and cure of the potato, is truly remarkable, and we think auspicious. Among the principal points, relating to which there is a general concurrence, are the following:

*Soundness and Vitality of the Seed.*—Renewing the seed from the ball of healthy vigorous plants every few years, even resorting to the native place in South America, and taking the seed from the wild potato, is considered important. When potatoes are to be raised from the tuber, sound, healthy, whole potatoes are recommended

for planting. Cutting potatoes is decidedly condemned. Anything which impairs the vitality of the seed increases the liability to disease.

*Quality or Kind of Soil.*—A dry, light, loose, warm soil, is considered necessary to the soundness and health of the vegetable, as well as to its richness and flavor, the latter depending quite as much on the quality of soil as on the variety of seed. A wet, heavy, compact soil, directly promotes the disorder. Far up on the side of a mountain or hill is a favorable location for the growth of the potato; and new land contains more of the qualities requisite for its nourishment and health, than old and worn out soils.

*Influence of Atmosphere.*—Potatoes should be as little exposed to the air as conveniently may be. Their natural place is under ground. By too much exposure they become poisoned, and turn green. Some recommended depositing them for the winter in holes under ground in a dry soil; or if kept in a cellar, to preserve them dry, in small quantities, in sand; and to keep them cool. Keeping large quantities in a body in the cellar, is by some supposed to promote heat and putrefaction. Planting in the fall is recommended by some, as potatoes left in the field over winter, are observed to come forward earlier in the spring, to grow more vigorously, to get ripe earlier and before the blighting rains in August, and to be more sound, fair and healthy.

*Manures.*—All anti-putrescents, such as lime, wood-ashes, pulverized charcoal, plaster, salt, nitrogen, etc., are believed to contribute directly to the health of the potato, as well as to add to its richness and flavor; and, of course, to prevent putrefaction and disease. Of other manures, well-rotted compost is preferred. Stable manure is too strong and heating, and produces ill-flavored, unhealthy potatoes, and is decidedly condemned.

*Disease, Contagion, Old Age and Death.*—These are common to vegetables as well as to animals. All are liable to disease, some more, some less, according to circumstances, predisposing causes, and preventive means. Some vegetable diseases are believed to be contagious. The present disease is thought by many to be of that class. One field of potatoes is liable to take the disorder from another field. Potatoes

are predisposed to disease, by bad cultivation, old age, bad soil, bad manures, sudden changes of weather, warm rains, etc.

*Ravages of Insects, Fungi, etc.*—The best writers consider the ravages of insects as at most but a predisposing cause, rendering the potato more liable to disease by enfeebling the plant. By many writers, insects are considered as remotely affecting the potato; by others, as having no effect at all. The fungus on potatoes is not the cause of the rot. It finds the potato previously diseased, a fit subject for its operation.

The general conclusions to which the facts presented in these various communications seem to lead us, are:

1. That the disease has a striking resemblance to the cholera, [!] and probably exists in the atmosphere.

2. That it is doubtful whether any specific cure has been, or ever will be discovered; but,

3. As in cholera, certain preventives are well ascertained, by the application of which the liabilities to disease may be greatly lessened. [Doubtful in either case.]

4. That by obtaining the soundest seed, by planting in the most favorable soils, and by using the most suitable manures, we may have a good degree of confidence in the successful cultivation of this useful vegetable.

5. That we may expect, that like the cholera, the potato rot will become less and less formidable from year to year, and eventually subside into a mild and manageable epidemic, if that term may be used in such a connection.

—♦—  
Laurels, etc.

DOCTOR WARDER :—

*My Dear Sir,*—While seeing you every day in Detroit, it never once occurred to me to pay for the ensuing year's Review. So much was I absorbed, that money—and especially *debts*—were quite too vulgar subjects to think of, amid so rich a display of fruits and flowers.

Once at home, in the daily drill of domestic duties, the cares and wants of a household, I am reminded that money is a very important adjunct in all the business of life; and its use a very great assistance to nature

even, promoting the growth of those rich specimens from the kingdoms of Pomona and Flora, which had so much interested me. I hasten, therefore, to inclose three dollars, which, please place to my credit for this year's Horticultural Review.

I wish, through your pages, to return thanks to the venerable David Thomas, of Greatfield, near Aurora, New York, for his directions in regard to cultivating the Laurels and kindred plants. Following his advice, I last April procured mossy earth from the brink of a high ravine, taking it three or four inches in depth from the surface. With it I combined a portion of dry, black earth, from the top of a thoroughly drained marsh. I placed the border on the north side of a high fence, and removed my sickly and decaying plants into it. It was too late to save my *Rhododendron maximum*, but on the *Kalmia latifolia* the effect was quite magical. Two years previous, it had been placed in the garden, a large, healthy shrub, but had now died out, so that only two branches of a foot in length remained. These immediately put forth flower-buds, and on the first of July, I had the gratification of seeing one of my childhood's treasures blooming in my garden, though, like its owner, far from its native wilds.

I have procured another *Rhododendron maximum*, from its native hills in Pennsylvania. I have no doubt but I shall succeed with this; at present it looks healthy and green.

I loaned D. Thomas' letter to an editor lover of nature, who returns me the following, in his paper. R. B. N.

**American Trees—Evergreens—*Rhododendrons* and *Kalmias*.**

THE late A. J. Downing was distinguished for many admirable traits, and for no one do we honor him more than for his truly American feelings. His perceptions of what was beautiful in American scenery were always

correct; and whether he was the first American who rightly appreciated the value and beauty of our American forests or not, he certainly was the first to make the culture of American trees, in preference to those from other countries, popular. We trust that the correct public taste which his writings have done so much to form, may never again be vitiated, and that the American people, in selecting trees to ornament their public grounds and to adorn their towns and cities, and private residences, will draw upon the riches of our own American forests.

For this purpose our Elms and Maples can not be surpassed, and the Tulip-Tree (*Liriodendron*) should be in every collection. Foreign arboriculturists regard this as among the most splendid of trees. We once knew a distinguished German botanist, who told us that one of these splendid trees, planted in the Royal Gardens of Vienna, blossomed for the first time while he was in the university in that city. It attracted universal attention, and the people so thronged the gardens to see it that the authorities were obliged to place a guard of soldiers around it, to prevent it from being completely destroyed by the multitude. But the enthusiasm of our friend was not to be suppressed; and watching a favorable opportunity, he bribed the guard, climbed its tall trunk, and bore off a bunch of its magnificent flowers in triumph.

We are inclined, with not a little diffidence, to recommend the White Ash, as an ornamental tree. Several planted near the residence of Mrs. Wright, on Michigan Avenue, have a fine head, are very clean and free from the ravages of the caterpillar, and in all respects make a fine appearance.

Our American evergreens are superb, and we are glad to see that our citizens are beginning to appreciate them. No one, if he have a particle of horticultural taste, can look at the splendid Firs and Pines in Dr. Egan's garden,—the growth of only a few years,—without feelings of admiration.—These evergreens grew rapidly and soon became large trees, and present a truly magnificent appearance.

There is another family of evergreens suitable for the lawn and the garden, to which we wish to call attention. They are commonly known by the general name of *laurels*. The varieties to which we refer are the *Rho-*

dodendrons and Kalmias. The leaves of these plants are very beautiful, and their large clusters of pink and white flowers are truly magnificent. They need, however, a suitable soil to insure their vigorous growth. So far as we can learn from our own observation and other sources, lime is poisonous to them, and they can not grow where it exists, even in small quantities. Of course we have no soil in or near our city in which they would flourish.

We have before us an original letter from David Thomas, a celebrated tree and fruit culturist in New York, to a lady friend in Michigan, who is an enthusiastic cultivator of plants and flowers. In this letter he recommends the soil taken from the brink of a ravine, where the lime has been leached out of it by the rains. He has tried the soil with entire success. Some peat earth may be mixed with it to advantage, provided it be brought from a locality where lime will not be likely to be mixed with it. The soil where they flourish in all their beauty in Pennsylvania, is formed by the disintegration of graywacke rocks, in which there is no lime. This peculiarity should always, we think, be regarded in the culture of these plants. They should always be planted in the shade, as they select shady woods for their *habitat* among their native hills in New York and Pennsylvania. If any of our citizens wish to cultivate those beautiful plants, it will cost them very little to try the experiment. We presume a suitable soil could be found near the Galena railroad, in some of the ravines at Babcock's Grove, or in the vicinity of Elgin. A few barrels of this soil would prepare a suitable border. We are not sure that any of our nurserymen can supply the plants; but they can be very easily procured of Messrs. Ellwanger & Barry, of Rochester.—*Dem. Press, Chicago.*

REMARKS.—Our venerable friend on the banks of the lovely Cayuga will, I hope, pardon the liberties sometimes taken with his letters. They are always highly valued, and such entire confidence is placed in the soundness of his views on horticulture and their complete reliability, that they are presented to their readers by editors who are anxious to disseminate useful information.

Excuse, therefore, friend Thomas, the occasional loaning of a letter, or the publication of one not specially marked "for the printer."

#### Review of the Review.

N O. I.

WELL, Mr. Editor! here am I, not knowing very well whether to address you or your readers—to whom I see you have promised my advent. Let us trust that neither they nor you may be mistaken; and yet I much fear that the captious ways of your critic may prove offensive to some.—Keep me advised, privately, as to the impression produced, that the sails may be trimmed accordingly.

In the November number of the Review, we find a Mr. Scott opening the dance with an article on Shade Trees. Thanks, thanks, Mr. Scott—you have chosen a glorious topic for an American. Let us thank everybody for teaching the world to admire our own proud forest-monarchs, and still more let us heap up thanks upon the man who sets us a good example, by planting, whether extensively, or even a single tree. Mr. Scott has evidently written in a region where it would not do to advise *purchasing* the trees to be planted; hence he urges the "availability" of the oak. This may do very well in Michigan, where the people should have an especial regard for the beautiful trees that compose the oak openings of portions of the state, and now tastefully adorn many of the charming villages with their spreading shade; and where, also, the young forest trees are very thrifty, and in a large proportion consist of young oaks of the different kinds, growing often in exposed situations, inured to sunshine, and therefore already fitted to the purposes of planting. Of these the White-oak and Overcup varieties are the finest specimens for this purpose, unless

where the more brilliantly foliaged kinds may be procured.

It is pleasant to see that the Agricultural Society of Lenawee has offered premiums for planting trees. That is well—plant trees, whatever they may be. But one piece of voluntary information is thrown out for the benefit of those who have yet to learn. Our author informs us that the Beech and Hickory won't *be moved*. True, they are difficult, and from the woods almost inevitably die. But we were about to give some gratis advice:—

Go to a nursery for your trees, and ten chances to one you will find better plants, better shaped and properly prepared for transplanting, so that though the first expense incurred may be somewhat greater than a ramble in the woods with your ox-cart, still the result at the end of the first and all succeeding seasons, will be infinitely more satisfactory, especially if you observe the rules laid down for correct planting.

Variety is also to be advised; and we are glad to find so high authority as the *Revue Horticole*, one of the highest French horticultural periodicals, in an article upon tree planting, after recommending the Horse-chestnut and several other fine species, thus concludes with a recommendation of the much abused *Ailanthus*:—"There is no tree which, for its vigor, its hardiness and its beauty, deserves more consideration than the *Ailanthus glandulosa*. [What say ye over-nice and very wise Americans to that?] It grows extremely fast, and very straight; and its wood, which is of a fine grain, is useful for many purposes. Added to this, it is by no means particular about the soil. The three things to be kept in view in planting trees for promenades are, their adaptation to the soil, their capability to bear pruning, and the arrangement of them in such an order as that those species only

may be together which expand and shed their leaves at or about the same time."

Where is *Cedar Bank*? It appears to contain some kind assistant editor, R. B. N., who has selected a right pretty fragment from Mrs. Whittlesey's Magazine. Query—can not that same be one of the lady correspondents we read about in another page? But where is Cedar Bank?—the question still recurs. We wot of no bank hereabout deserving the title, in the general dearth of evergreens that is much lamented in the Western States.

*Agricultural Institutes*, and *little World's Fairs*.—All very well, especially in the Southern States, where state fairs have not yet been instituted. Encourage these efforts, dear cousins, and all will go well with you. Hold not back, however, from all the great agricultural and other movements because they chance to originate beyond the limits of your own neighborhood. South Carolina is making a noble proposition for a great fair. A southern convention is called for May, in Alabama. Let these associations, whether embracing one or more states, be so constituted for convenience, and not to gratify local prejudice.

The *American Pomological Society*.—Well, that is a national affair truly, and no sectionalism therein nor thereunto pertaining. The adoption of a constitution is a sort of necessary evil, and probably they have made as good an one as usual; but the change of the name is a decided improvement upon "*Congress*," which has been a laughing-stock heretofore with the uninitiated, and those who do not value *apple knowledge* so highly as familiarity with Latin gerunds. Would you believe it?—there are those who affect to think that a gentleman of information, who devotes himself at all to such matters of *taste* as these, is throwing away his talents—casting his pearls

before swine. The census of the United States informs us, to be sure, that the annual product of our orchards amounts to the pretty little sum of \$7,720,862; and it is notorious that a very large majority of the fruits are very inferior in quality, and that with our present and constantly increasing knowledge of fruits, and their proper culture, the very information acquired at these conventions and congresses of apple-eaters, the orchards of the next ten to twenty years will furnish crops of much greater value.

Hold—hold that wild Frenchman, whoever and wherever he may be, who has uttered the rash assertion that "North America can not produce wine fit to drink." Well, well; we must excuse the ignorance of these savans; for, though samples have been sent to Europe, frequently, to friends, we appreciate our own products too highly to be able to spare much for the European demand.

*A small Southern House.*—There you have Gervasse Wheeler again. We suppose that he calls this a *southern* house because it has a wide-spreading roof porch, and in the center the smallest possible chimney, which would seem to be a small allowance of smoke-room. However, when we study the details of the plan, there does appear to be a cozy snugness in the wedge-shaped rooms, all pointing in to one common center and ventilator, which is quite attractive. For a *small* and *cheap* building, this plan combines many advantages. The elevation, seen in the frontispiece, being an architectural and not a perspective picture, has a very hard outline, and is not at all so attractive as it should have been.

*The Garden—Bulbs.*—Thank you, Dr. Kennicott, for telling everybody that they can purchase bulbs cheaply, and that they will thus secure a succession of vernal enjoyment. In our childhood, we remember

that the old women (Dutch and German) were celebrated in every neighborhood for their gorgeous displays of this class of flowers. In our residence among the *new* gardens of the West, we have seldom seen them.

*Indigenous Flowers*—the loves of all girls and many boys—why are they not more cultivated? Is there no patriotic nationality in our people, that they will run wildly after a foreign, high-named flower, which they have never seen, and scarce heard of, except from those interested, while the lovely native beauties of our own country are rapidly disappearing before the ax and the plow. Indeed, we often need to use European eyes to discover the beauties of our own plants, which then become immensely desirable, and at high prices too; though for years they may have been passed unnoticed in our daily walk!

*Stowell Corn.*—Is this a humbug? Will not somebody give us the whole truth, quietly and fairly stated. Thirty dollars a bushel for the seed! and that by dealers—the wholesale price! What is it at retail?

*Rome Beauty*, or Gillett's Seedling, is a fine apple, and well may the old nurseryman, farmer, and orchardist of southern Ohio, H. N. Gillett, feel proud of it. He has seen it shipped upon the broad Ohio by the flat-boat load; in the best company too, that of Russets, Pryor's Red, and others, going to the same market and attracting universal admiration. This article gives us an insight into the manners and customs of early times, their nurseries and modes of conveyance.

How is it, Mr. Editor, that you always make the Vineyard Department of your monthly look so cheerful? Is it the fancy pitcher, that I often imagine to be brimming full of Catawba—the pure juice, as suggested by the graceful and fruitful vine en-



twined about the table? Well, it is from some agreeable association, doubtless; for, beyond the pretty vignette, these pages look like all the rest.

*Hermann Wine Fair.*—Thanks to the public spirit of A. Kayser, Esq., this jubilee is kept up from year to year, and his liberal premiums draw together a fine collection of samples. Some of these are superior; and you must look to your laurels in Cincinnati, lest there break out another "Rhine of America," that will excel you with its delicious products. Your reporter has made a very interesting account of the trip from St. Louis; but, we opine, that he knows more about the *product* than of the *production* of this or any other agricultural article, else he would not have written about the *must*, (new juice,) standing upon the *lees*, (sediment from the made wines.) He should have said, as we suppose he intended, the mashed grapes were not allowed to stand nor to undergo any fermentation before they were pressed. But how should he have acquired a knowledge of technicalities? He has given us a very agreeable and a very intelligent account of the affair, for which he truly deserves the reader's thanks.

*New Grapes.*—O Nicholas! great leader of the vine-dressers! when wilt thou cease to accumulate the obligations under which the country is already lying, and by which we, the people, are bound ever to thank thee for the rich results, in strawberry and grape and sparkling wine! Who like Nicholas Longworth, Esq., has toiled for decades of years in procuring, and then testing, and then, better still, in diffusing the varieties that have proved worthy of cultivation. During all this time no one has been more active in decrying the many humbugs that are put off upon the unwary as *novelties*, and, probably, no one has been more often humbugged than he, among the

multitudes of kinds that he has received and put upon trial; but he may congratulate himself that he has never contributed to continue an unworthy variety by diffusing it as desirable.

*Dr. Valk's new Seedling Grape.*—Some time ago, a very severe article appeared in your pages respecting this gentleman and his pet grape, which to some seemed wholly uncalled for and in bad taste. Here we have his own statement in an official form, addressed to the Pomological Congress. Let us examine it. A Black Hamburg was "fertilized from an Isabella," in 1845; the seed planted produced fourteen young vines; *two years'* residence in pots was fatal to all but two, so that, in the spring of 1847, these were planted out, with no care, cultivation, nor protection extended to them in summer nor *winter* (they spread on the ground then, as it appears the poultry ate all the first crop). They fruited in 1850; destroyed as just stated, again in 1851, but stolen, except one bunch, that described by Mr. Downing, last year. The fruit presented to the Congress in 1852 was from one of the vines; the other, having been moved, did not bear.

It is remarkable that two seedlings should be so much alike that they should be spoken of by the propagator as one. We can not tell whether the grapes shown in Philadelphia were from the same vine that produced the bunch sent to Mr. Downing.

We have seen no wood nor leaves by which to judge of the amount of hybridation with the Isabella, and we are told that the leaves are "very deeply serrated," which is a common character of the foreign grape. Now the question fairly arises, whether, "with all possible precaution," the Doctor did succeed in fertilizing with Isabella pollen, or whether your friend *Dus-ter's insects* have not done the work by car-

rying pollen from the St. Peter's, or other foreign vine in the house. *Reasons*:—In the length and appearance of the bunch, it resembles the St. Peter's. Though the berries were immature and sour in September; the whole aspect of the fruit was foreign.—With regard to the *hardiness* assumed for the plants, without doubting the Doctor's veracity, let us reflect upon the conditions to which they were submitted. The soil was not prepared, "nor have they received the least attention by cultivation." Thus "growing wild," they were not *forced* into soft wood; but hardened as they progressed, and lying probably on the ground they would

be protected by their very neglect; the drifting leaves and snow would be all-sufficient. The tenderest roses often escape a severe winter under similar circumstances. But there is one other observation worthy of note, before we hastily adopt the theory that this is a hardy variety:—Several other foreign sorts have grown and borne well for a few years, and then disappeared. The Doctor has acted wisely in retaining the stock in his own hands; he does not desire any one to be humbugged until the matter is tested.

Excuse the prolixity of this first communication.



## Pomology.

### REPORT FROM KENTUCKY.

#### *To the American Pomological Society.*

In casting about for a topic, the committee have deemed none more appropriate for the basis of their present report, though touched upon in their last, than climate, elevation, and aspect, in their effects upon orchard culture. Correct knowledge on these subjects lies at the foundation of all successful and profitable efforts at fruit culture, and the committee believe can never be acquired too soon.

*Climate.*—By the books, climate is defined to mean a distribution of heat over the earth's surface, and that heat is made to attain under the equator 84 degrees of temperature (Fahrenheit) as its mean annual maximum, diminishing as is supposed in the

direction of the poles by a fixed ratio; yet by reason of the difference in radiative force between water and land, and of other causes, the lines which constitute the boundaries of climates are not parallels to the equator, and, if the line which marks any given degree of mean temperature upon the water be extended in the direction of land, it will, on striking it, show a rise in the mercury greater by day, and a fall as much lower by night, than upon the water; and this difference in the diurnal range of the thermometer increases as the line extends inward upon the land until we pass the point to which the modifying influence of the water reaches. Hence it follows that all vast districts of country, like the valley of the Mississippi,

have riveted upon them by the action of fixed laws, those features of a climate which are termed fickle, great diurnal ranges of the mercury, and great and sudden changes of temperature in the seasons.

In studying such a climate, the proper inquiry for the pomologist is this—Does disaster follow the action of those periods of intense cold which occur only occasionally in a series of years? or does it result from those sudden blasts of hyperborean cold, which, in such a climate, follow not unfrequently after vegetable life has been excited by genial warmth into a state of growth more or less active. After some personal investigation upon this subject, and the collation of many communicated facts, the committee are strongly inclined to believe that although intense cold of long duration may sometimes destroy even the life of a tree by rupture of its tissues from the expansive force of congelation, yet far the greater number of injuries experienced by the cultivator, either in health of his trees or in the thrift of his crops, are traceable to the agency of comparatively moderate cold brought to bear upon vegetable life in a state highly susceptible of harm by reason of the presence of fluids in a state of circulation, or of fluids upon the surface of the leaves and branches, or of fluids in a state of saturation in the soil containing the roots. In confirmation of this opinion, they refer to the following facts, viz: the winter just passed has been one of marked severity in the West, and the character of the past spring, too, was distinguished by some of the most peculiar features of a changeable climate, affording thus a good opportunity for a comparison of the destructive force of intense cold and that of unseasonable cold. The committee find it difficult to refer some casualties reported to this cause of harm, whilst in regard to others there seems not a shade of doubt in fixing upon the destroying agency. Thus one gentleman had a large peach orchard which in the spring he found dead, each tree alive in its roots and for a space up the trunk, about as high as the surface of the snow at the time the mercury went to eighteen degrees below zero. This destruction would seem like the work of intense cold, but many other orchards stood the same degree of cold, receiving but little injury other than the loss of the crop, which

evidently occurred at this time. Whether in this case there was present the condition of a wet soil to aggravate the force of cold, or such a conformation of the earth as to generate a more intense degree of cold than elsewhere, the committee are unable to say.

In regard to the effects of the spring upon vegetable life, proofs are more numerous and far less equivocal. On the 18th of March, the fruit crop, except peaches, was fast coming forward; apricots had partially bloomed; some apples and pears had in their fruit buds made considerable development, leaves being formed; the blossom buds of the plum were very vigorous and healthy, and the latest had swollen till the coiled petals were visible. At this time the thermometer sank to thirteen degrees above zero, a temperature thirty-one degrees warmer than that of January; yet the harm resulting from the temperature at thirteen above zero has been tenfold greater, the committee think, than that which was caused in January by eighteen below. Bolmar's Washington and Duane's Purple plums in some places, although swelling to bloom, were so effectually killed as to show no more signs of growth; many varieties of the plum on the same grounds bloomed, but cast their fruit; some pears and apples had every fruit and wood bud killed so as to slough off, the same trees afterward pushing forth adventitious buds and making a new coat of leaves. The hardy willow which had remained unhurt after the zero spell in January, and was pushing into leaf even to the points of the branches in March, lost in some places every wood bud in the system, together with the extremities of the branches for full six feet in from the points. As for Heart Cherries, although almost ready to bloom, they were literally swept out of existence; one gentleman with an orchard containing sixteen varieties, had only the Ox Heart and two other sorts left, while, as if to prove there was no security in sorts, a neighbor lost all his Ox Hearts at the same time.

Again; on the 1st of May, 1851, the fruit crop from the lakes, as far south as we have heard, was one of the most abundant and most promising ever looked upon. At this time a fall of the mercury to a temperature ranging from 20 to 26 degrees, carried off the whole fruit crop, except in a few places peculiarly located, where we believe local

causes always exist, capable of preventing this wide range of the thermometer, unless in very rare cases, when (as Dr. Kirtland has said in one of the best articles on this subject which has yet been printed) the general cold prevails over the local warmth, as was the case in January last, when the mercury could not rise on the noon of a bright sunny day. Such favored situations, the committee believe, are found in belts of land around bays and lakes, on small islands, and upon elevated points.

*Elevation.*—Elevation, like nothing or southing from the equator, diminishes temperature, and by the same book authority already quoted (*Encyclopedia Britannica*) at a point under the equator, where the mean temperature is 84 degrees, by ascending some 6,000 yards one reaches the point of perpetual congelation, or the mean annual temperature is one degree lower for each 400 feet of ascent; the decrease in this case also progressing by a fixed ratio.

An elevation of four hundred feet, according to Loudon, will retard the season of vegetation three or four days, and is therefore from this cause favorable to fruit culture, inasmuch as during this delay the season is advancing to settled warmth. But in cases like that of May, 1851, where vegetation had made such advances that no difference seemed to exist between the foliage of the heights and that upon the plains, a different and far more powerful cause is required to work that salvation of the fruit crop upon the hills, which was nowhere else witnessed in the West, except upon belts of land around the lakes, and those belts very narrow, observes an eye-witness, the very respectable editor of the *Western Horticultural Review*.\* What this more powerful force may be, remains to be settled. The committee, however, deem it a matter of no small moment, in a climate where fruit culture is uncertain, to establish it as a truth, that hills at a certain elevation enjoy a climate where the thermometer never rises so high by day as upon the plains below, and yet never sinks so low at night, that they possess a climate nearly as uniform as countries surrounded by water and as nearly as well suited to fruit culture. For a plausible

theory on this subject, the committee refer to an article which appeared last year in the columns of the *Louisville Journal*, from the pen of a member of this committee. The author supposes this universal agency to be that volume of the atmosphere which is daily heated by conduction from being in contact with the earth's surface, and that this volume of air, like other heated masses, giving out its caloric mainly from the surface in contact with the earth, may and does, at an elevation of some hundred feet, maintain a large portion of its heat when no wind blows to mingle it with other strata, during a whole night and until the sun's action again replenishes the stock.

*Aspect.*—Aspect, the committee consider in this climate of little importance, except that a southern one aggravates the evils of a fickle climate by increasing the power of the sun; and one which shuts out the noontide sun, on the other hand, modifies the temperature, and thereby betters the climate.

In conclusion, the committee remark that they feel assured that every pomologist entering upon the business of fruit culture in a climate like that of the West, ought to consider himself engaged in an employment rendered uncertain by the action of natural causes, and that this uncertainty can be nowhere escaped, except in the few favored positions protected by "*local warmth*," such as the margins of large bodies of water, the summits of hills, or points sheltered from cold winds. Moreover, they are constrained to think that it is hoping against hope to expect success in efforts to cultivate any of the tender fruit trees, which die after losing the young shoots and their system of leaves under action of those spring frosts spoken of under the head of climate, such as the Heart Cherry, English Walnut, etc., unless in cities or at some point not having too wide a range for the mercury.

L. YOUNG, *Chairman.*

#### Agriculture of the West.

*Extract from the speech of Mr. Worthington, at the State Fair.*

THE agriculture of the West is in a transition state. The most successful in making money, of the farmers of the West, had been those who, disregarding the traditions of

\* See Editorial Letter, p. 582. Gallup's nursery is scarcely within the charmed bounds of Lake influences.

farming in older countries, had purchased large tracts of good land, cultivated it in rather a slovenly manner, taking the cream off the land and selling the products lower than those could afford to, who maintained the fertility of their land by manure.

This can not last; and although hauling manure to any distance, except in the vicinity of large towns, or other high markets, does not as yet pay, yet in the older part of the state, the farmers found it most profitable even on soils originally the best, to resort to clover and other green manures. This he hoped would be generally resorted to before it be too late, so that Ohio lands may maintain their high character.

Two suggestions more he would make as appropriate to the season. The first, to those of his brother farmers who wished to plant fruit or ornamental trees.

Mr. W. had found it best to dig the holes for the trees in the fall, about eighteen inches deep, and three to six feet wide, as the size of the tree may require, and thus expose the earth to the action of the frost and rain and air during the whole winter, planting the tree as early in the spring as the weather will admit.

This plan Mr. W. had found not only to secure almost a certainty of their growing, but also to produce a growth of the most healthy and robust character.

#### Fruit Lists.

##### FRUITS WORTHY OF GENERAL CULTIVATION.

*Apples*: American Summer Pearmain, Baldwin, Bullock's Pippin, Danvers Winter Sweet, Early Harvest, Early Strawberry, Fall Pippin, Fameuse, Gravenstein, Hubbardston Nonsuch, Large Yellow Bough, Lady Apple, Porter, Red Astrachan, Rhode Island Greening, Roxbury Russet, Summer Rose, Swaar, Vandervere, White Seek-no-further, Wine Apple, or Hays, Winesap. And for particular localities, Canada Red, Esopus Spitzenberg, Newtown Pippin, Northern Spy, Yellow Bellefleur.

*Pears*: Ananas d'Ete, Andrews, Belle Lucrative or Fondante d'Automne, Beurre d'Anjou, Beurre d'Aremberg, Beurre Bosc, Bloodgood, Buffum, Dearborn's Seedling, Doyenne d'Ete, Flemish Beauty, Fulton, Golden Beurre of Bilboa, Louise Bonne de Jersey, Madeleine, Paradise d'Automne,

Rostiezer, Seckel, Tyson, Urbaniste, Uvedale's St. Germain for baking, Vicar of Winkfield, Williams' Boncretien or Bartlett, Winter Nelis. And for particular localities, Grey Doyenne, White Doyenne.

*Apricots*: Breda, Large Early, Moorpark.

*Nectarines*: Downton, Early Violet, Elruge.

*Peaches*: Bergen's Yellow, Cooledge's Favorite, Crawford's Late, Early York, *ser-rated*, Large Early York, George the IVth, Grosse Mignonne, Morris' White, Old Mixon Free. And for particular localities, Heath Cling.

*Plums*: Bleecker's Gage, Coe's Golden Drop, Frost Gage, Green Gage, Jefferson, Lawrence's Favorite, Purple Gage, Purple Favorite, Washington. And for particular localities, Imperial Gage.

*Cherries*: Belle Magnifique, Black Eagle, Black Tartarian, Downer's Late, Downton, Elton, Early Richmond, for cooking, Graffion or Bigarreau, Knight's Early Black, May Duke.

*Grapes*: (Under glass,) Black Hamburg, Black Prince, Black Fontignan, Chasselas de Fontainebleau, Grizzly Frontignan, White Frontignan, White Muscat of Alexandria. (Open culture,) Catawba, Isabella.

*Raspberries*: Fastolf, Franconia, Red Antwerp, Yellow Antwerp.

*Strawberries*: Boston Pine, Hovey's Seedling, Jenney's Seedling, Large Early Scarlet.

*Currants*: Black Naples, May's Victoria, Red Dutch, White Dutch, White Grape.

*Gooseberries*: Crown Bob, Early Sulphur, Green Gage, Green Walnut, Houghton's Seedling, Iron-monger, Laurel, Red Champagne, Warrington, Woodward's White Smith.

##### NEW VARIETIES WHICH PROMISE WELL.

*Apples*: Autumn Bough, Hawley, Melon, Mother, Northern Spy, Smoke-house.

*Pears*: Brandywine, Brande's St. Germain, Beurre Giffard, Chancelor, Doyenne Boussock, Doyenne Goubault, Duchesse d'Orleans, Duchesse de Berri, Diller, Jalousie de Fontenay Vendee, Kirtland, Limon, Manning's Elizabeth, Nouveau Poiteau, Onondaga, Ott, Pratt, Paradise d'Automne, St. Michel d'Archange, Stevens' Genesee, Van Assene, Striped Madeleine.

*Plums*: McLoughlin, Prince's Yellow Gage, Rivers' Favorite, St. Martin's Quetche.

*Cherries*: Bigarreau Monstreuse de Basset, Early Purple Guigne, Reine Hortense.  
*Grapes*: Diana.

*Raspberries*: Knevett's Giant.

*Strawberries*: Burr's New Pine.

#### REJECTED FRUITS.

*Apples*: Beachemwell, Cheeseboro' Russet, Caroline (English,) Cathead, Dodge's Early Red, Egg Topp, Fenouillet Rouge, Gloucester White, Golden Reinette, Gray French Reinette, Grand Sachem, Henry's Weeping Pippin, Hoary Morning, Irish Peach, Kirke's Lord Nelson, Large Red Sweeting, Marmalade Pippin, Muscovia, Pennock, Priestly, Pigeonette, Red Ingestrie, Red Doctor, Red or Royal Russet, Rowland's Red Streak, Salina, White Ingestrie, Woolston's Red Streak, Woolston's White Sweet.

*Pears*: Admiral, Aston Town, Angers, Autumn Bergamot, Alexander of Russia, Ah! Mon Dieu, Bon Chretien (Spanish,) Bon Chretien (Brussels,) Bergamotte Sylvange, Bergamotte Fortunee, Beauty of Winter, Belmont, Beurre d'Angleterre, Beurre Seutin, Beurre of Bolwiller, Beurre Knox, Bezi Vaet, Bruno de Bosco, Blanquet a Longue Queue, Burgomaster, Bleecker's Meadow, Citron of Bohemia, Cuvelier, Chat Brule, Chair a Dame, Charles Van Mons (Old,) Cassolette, Compte de Fresnel, Copea, Caillot Rosat, Clara, Clinton, Clapp, Citron de Sierens, Croft Castle, Crassane, Dearborn of Van Mons, Downton, Duquesne d'Ete, Doyenne Mons, Deschamp's New Late, Dumbarton, Doyenne Dore, D'Amour, Elton, Endicott, Famenga, Frederick of Prussia, Forme Urbaniste, Fantasie Van Mons, Forme des Delices, French Iron, Franc Real d'Hiver, Green Yair, Grise Bonne, Garnstone, Green Catherine, Green Sugar, Gros Blanquet, Green Chisel, Hays, Hawthorne's Seedling, Horticulture, Hastiveau, Hessel, Huguenot, Ipswich Holland, Jargonelle (of the French,) Kramelsbirne, Lederbirne, Louise Bonne, Lansac, Lincoln, Louis of Bologne, Madotte, Madame Vert, Miller's Seedling, Marquise, Marcellis, Michaux, Navet, Orange, Orange Tulipee, Petit Muscat, Princess of Orange, Platt's Bergamotte, Passe Long Bras, Prince's Portugal, Pope's Scarlet Major, Phillips, Pitfour, Pitt's Marie Louise, Rousselet de Rheims, Rousselet St. Vincent, Royale d'Hiver, Swiss

Bergamotte, Souveraine, (de Printemps?) Swan's Egg, St. Bruno, Sans Pepins, Surpasse Meuris, Summer Rose, Thompson of New Hampshire, Tucker's Seedling, Trubcherdy Dulle, True Gold of Summer, Whitfield, Winter Orange, Wurzer d'Automne, Winter Crassane, Yat.

#### State Fruit Committees.

##### CHAIRMEN.

Hon. Samuel Walker,	General Ch'mn, Boston.
P. Barry,	New York, Rochester.
T. P. James,	Pennsylvania, Philadelphia.
Dr. Lewis P. Bush,	Delaware.
Joshua Pierce,	D. of Columbia, Washing'n
Rt. Rev. S. Elliott, Jr.,	Georgia, Columbus.
Yardley Taylor,	Virginia, Loudon.
Col. Henry Little,	Maine, Bangor.
H. F. French,	New Hampshire.
Dr. E. Wight,	Massachusetts, Boston.
C. Goodrich,	Vermont, Burlington.
Stephen H. Smith,	Rhode Island, Providence.
George Gabriel,	Connecticut, New Haven.
William Reid,	N. Jersey, Elizabethtown.
Samuel Feast,	Maryland, Baltimore.
William Summer,	South Carolina, Pomaria.
Henry K. Burgwyn,	North Carolina, Raleigh.
R. Buchanan,	Ohio, Cincinnati.
Dr. J. A. Kennicott,	Illinois, Northfield.
J. D. G. Nelson,	Indiana, Fort Wayne.
Capt. F. W. Macondry,	California.
Charles A. Peabody,	Alabama, Columbus, Ga.
A. G. Sems,	Florida.
E. D. Hobbs,	Kentucky, Louisville.
Thomas Affleck,	Mississippi, Washington.
James Grant,	Iowa, Burlington.
Thomas Allen,	Missouri, St. Louis.

The chairmen here appointed, have power to make up their committees, and will report in 1854.

#### Grading Fruits.

THE members of the Central Horticultural Society, Rouen, France, have decided, at their session March 27, 1852, that they would be governed in classifying fruits by this simple scale:—Good, 1st quality; Medium, 2d quality; Bad, 3d quality.

Others prefer two or three grades in each class, thus:—A, No. 1, No. 2, No. 3, for excellent, very good, and good; and B, No. 1, No. 2, No. 3, indicating fair, poor, bad.

## DESCRIPTION OF THREE FINE PEARS.

BY ANDRÉ LEROY, ANGERS, FRANCE.

*Colmar d'Arenberg.*

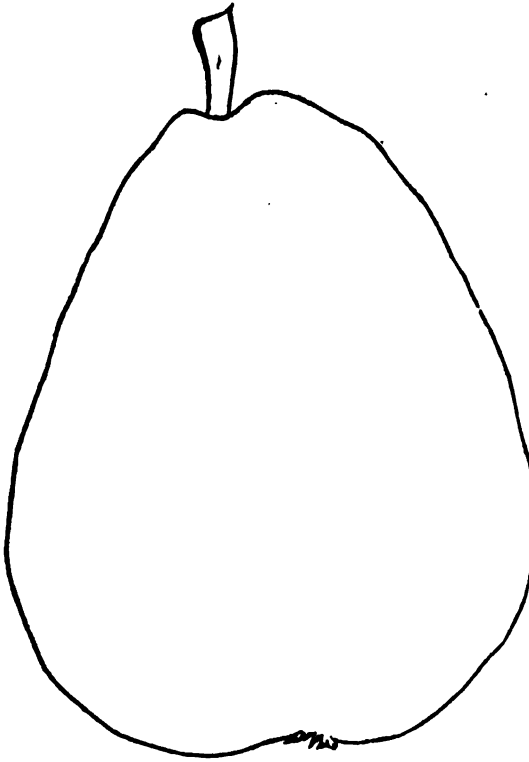
THIS is not a new pear, since it has been fifteen years in the nurseries of M. André Leroy, at Angers. The tree that produced the fruit of which the above is an outline, was planted in his "fruit school," or specimen orchard, five years since. This season it bore eleven pears like this, and some that were rather smaller.

Fruit very large, of irregular form, bossed and mamelated toward the stem, rounded toward the eye, which is very small and sunk in a very deep basin. The stem is short and curved, and protected at its point of insertion by a projection or mamelon. Color gray on deep yellow, spotted & marbled with deeper gray. The skin is thin; flesh neither fine nor coarse, breaking; juice abundant, acerb, but very good nevertheless. It ripens in October and December.



COLMAR D'ARENBERG.

The tree is vigorous, forming a handsome pyramid; the branches are reddish, thick and short; the buds are large and closely set on the shoots.



THOMSON.

*Thomson.*

This variety is not very new, having been described in the London Horticultural Society's Catalogue published in 1842; but it has appeared to me its excellent qualities are not sufficiently well known. Fruit medium, turbinate, rounded toward the eye, uneven and *folded* about the stem; the surface is very irregular and rugose. The stem is short, curved, and planted in a small cavity having folds. The eye is of medium size, closed, and placed in a shallow basin. The color is greenish yellow, marbled with patches and lines of gray, and covered with very small gray dots. A large russet spot surrounds the stem. Flesh white and greenish yellow, fine, melting, buttery; the juice is abundant, sweet, highly and agreeably aromatic.

This is an excellent pear, of fine quality, which ripens in October and November.

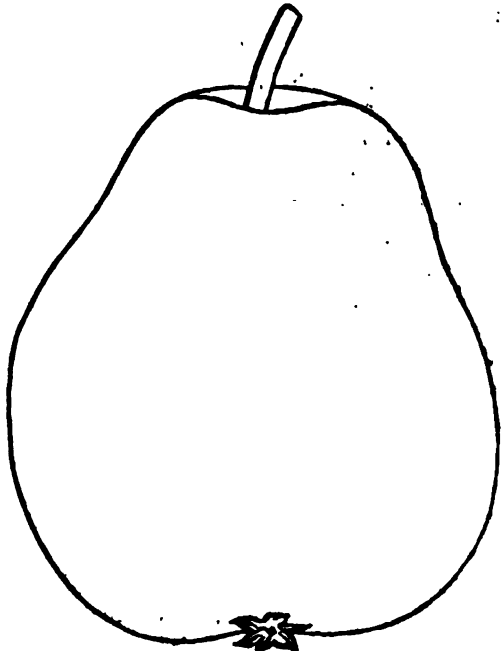
*Enfant Prodigue.*

This fruit was obtained by Van Mons from Mr. Bivort, who described it in 1847.

It is of medium size; form quite regular; skin russet or gray, like Messire Jean, slightly touched with red. The flesh is greenish white, firm, breaking; the juice is abundant, acidulous, but sugary, and very good.

Ripens in September and October.

ANDRÉ LEROY,  
Desportes,  
Angers, France.



ENFANT PRODIGE.



**Dwarf Pears for Marketing.**

A CORRESPONDENT inquires if it would be profitable to set out a thousand dwarf pear-trees, with a view to marketing purposes. The answer must be—If such sorts are selected as have been found durable on the quince; and if good enriching cultivation is given them, they would probably prove quite profitable. They should be trained as *half standards*, that is with *heads* on bare trunks about two feet high. This will prevent the danger of the lower limbs being split off by deep snow, and the only pruning they will require will be a thinning of useless shoots once a year, and preserving a neat ovate shape to the heads.

It must not be forgotten that the roots of the quince, being smaller and in a more compact circle than those of the pear, need a better supply of the elements of fertility, if the tree is expected to receive its due amount of nourishment. Hence, constant and enriching cultivation must be given.

Among those sorts which have proved durable on the quince, are Louise Bonne de Jersey, Stevens' Genesee, Angouleme, Glout Morceau, Passe Colmar, Easter Beurre, Beurre d'Amalis, Diel, Doyenne Boussouck, etc. Many other varieties will grow freely on quince for a few years, but the first good crop of fruit, (even on double worked stocks,) exhausts the trees, and they soon languish and die.—*Albany Cultivator*.

**The Results of Manure on a Pear-Tree.**

TWENTY-FIVE years ago, Linus Cone, of Oakland county, Michigan, planted a Summer Bon Chrétien Pear-tree; the culture of which, after a few years, was neglected. The fruit at first was fine, specimens often weighing nearly a pound each, but afterward grew gradually smaller, till nearly worthless. The tree was then well pruned, washed with lye, the ground well spaded, with no improvement. Last spring, twenty bushels of manure from a blacksmith shop, consisting of dung, parings of hoots, cinders, etc., was spread and dug in. Twenty bushels of fine, high-flavored fruit was the result the same season.—*Albany Cultivator*.

**Duration of Dwarfed Pears.**

I WAS much interested to know the age of the oldest pear-trees, that were on the quince

stock, and was gratified to be shown a lot reputed to be one hundred years old; I therefore noted it down that the quince stock did not impair the longevity of the pear. We do decidedly protest against the unnatural system of pruning the pear, both summer and winter, as adopted by the French, lauded by some of the English, and applauded by a few of the fruit-growers of our own continent. We believe that pears and apples can be more profitably grown in this country than in either England or France, and it is no chimera to predict that Pennsylvania will yet grow more of these fruits than both of the above countries. We have a peculiarly constituted climate to enable the earth to make its yearly return to its cultivator.—*R. Buist, in Phil. Florist*.

**Curculio.**

DR. WARDER:—Every lover of that most delicious fruit, the Plum, whether possessed of a tree or not, must feel more or less interested in the success of its culture. In this vicinity, raising this fruit has been so nearly abandoned on account of the ravages of the Curculio, that no choice plums are found in our markets; every successful experiment, therefore, in raising the fruit ought to be recorded, that those who have trees may be induced to attempt to destroy the "little Turk." A gentleman in Detroit has raised very fine plums this season by throwing air slaked lime into the trees when the leaves were damp, repeating this every few days. Syringing with lime-wash and sulphur, has also been tried with success.

I have raised plums on a portion of a tree, upon which dry ashes were sprinkled or thrown when the tree was wet, repeating the operation several times during the growing of the fruit; the crop upon every other part of the tree and all the other trees in the same garden, being entirely destroyed by the Curculio. I did not, at the time, attach much importance to the experiment, as I had plenty of other trees in the same gar-

den, and the ashes might have seasoned the fruit a little too highly for their relish. I disposed of the place the next season, and have had no opportunity to experiment since, as my young trees have not yet come into bearing. It may be, the insect was only *frightened away*, and the ashes did not serve as a preventive. I was induced to try it from the fact, that I had always used it upon cucumber vines and found it to preserve them from the striped bug in a great meas-

ure. The use of plaster of Paris, by William H. Ludlow, is worth the trial, but I would suggest that it would be most likely necessary to make more than one or two applications, in this or any other similar experiment, especially should it be applied after a heavy shower, as all traces of it must be washed away and a new application be indispensable. Very respectfully, yours,

A. C. H.

DETROIT, November 19, 1852.



## The Garden.

### CHISWICK—NOVELTIES.

Mr. Buist, of Philadelphia, attended the great horticultural show at Chiswick Gardens, July 10th, as appears from his article in the *Philadelphia Florist*, from which the following extracts are made:

**FUCHSIAS.**—The best reds were Sir J. Falstaff, Voltigeur and Alpha.

**FANCY GERANIUMS.**—Fairy Queen, Jenny Lind, Madam Rosati, Albonii, Delicatum, Beanti, Clementine and Perfection were the most remarkable. This lot of plants was one of the centers of attraction; they were from two to four feet in diameter.

**VERBENAS.**—Seedling Verbenas: Scarlet King, British Queen, (white,) Drummondii, (mottled,) were worthless, and would not have brought over ten cents each in Philadelphia market.

**NEW ACHIMENES.**—Patens major, dark violet; longiflora major, large blue; Marguerite, pure white; Warszewiczi, blue; Khellii, rose; and Backmanii were worthy of note.

The most graceful and attractive of the

new evergreens were *Thuja Goveniana* and *Cupressus funebris*.

Mr. B. left these exciting scenes with the conclusion that London was the place for patience and flowers—Philadelphia for fruits and temporary excitement.

### The Seed Trade.

Our seed dealers, or at least some of them, are rapidly learning English practices, and it has already become difficult to find pure seed of the better class of garden vegetables, and even the grass seeds are often sold of mixed and very inferior qualities. There are doubtless some dealers who pursue an honorable course, but hundreds of wagons are now traversing the country, selling seeds of inferior qualities. The market gardeners near our large cities seldom or never buy seeds of the large seed dealers; they are compelled to purchase from each other, each raising some one or two kinds, and making the necessary exchanges. Late Bergen Cabbage seed is seldom sold by market garden-

ers for less than \$8 per pound, still you may buy seed purporting to be the true Late Bergen Cabbage, at \$2 per pound, or even less; but as no grower requires but a few ounces of this seed, it is certainly better to pay the large price to obtain the pure article. A seed dealer in Newark is now selling a bean which he assures his customers has been lately imported from Lima, and is the true Lima Bean. It is flat, with its two sides parallel throughout, and is not a profitable sort. The Lima Bean of the true kind, whether grown in Lima or elsewhere, is short, very thick, and with a deep dent in each side, and none other should be grown. We have several times been tempted to buy seeds from large dealers, and have nearly as often found ourselves deceived. In some instances they were not true to the label, in others new and old seeds were mixed together, and in many instances they would not germinate at all. We imported last year from England, under the cover of a popular name as a seed dealer, a quantity of early sorts of Cabbage seeds, and have now several bags on hand which are worthless. The following article from the *London Farmer's Magazine*, and accompanying letter from the *Gardener's Chronicle*, will show that the English farmers are suffering under similar difficulties.—ED. WORKING FARMER.

That there is something rotten in the seed trade can no longer be denied. The increasing complaints of correspondents, who declare that they are supplied worse and worse every year, furnish so lamentable a proof of the deterioration of English seeds, that our duty as public journalists compels us to advert to the subject; and the more so, because the remedy lies with the public itself, and can be readily applied by the public, although by no other party.

Among our agricultural letters of this week will be found a communication signed "A. L.," in which the writer exposes, with an evident knowledge of the arcana of seed dealing, some of the evils of our present system. He says that the farmer sows twice as much clover seed as is necessary, because he buys bad seed; he asserts that this is equally the case with turnip seed; and he adds, that inquiry into the trade in garden seed would reveal some equally startling facts. "There are persons who could tell

of buying at prices two or three times greater than the article is sold for. I have known 23s. a bushel given for seed by parties whose own lists quoted it at 18s. the same season, both before and after the purchase. Others could tell of seeds being grown without any intention on the part of the raisers to sell them by their proper names, but to be killed and mixed with other seed of like appearance. The men must be mad who do these things! Not at all: competition is so great, and the public so determined to have a cheap article, that they can do no other way than as others do, or give up the trade. Now is not this a serious subject to all the parties concerned? It must be to the purchaser, who not only gets an inferior kind, but has to sow so much thicker, that he saves nothing even in the first cost of seeds. It must be to the retail dealer, who, without any fault of his own, loses the respect of his customers by selling a bad article, though the best he can procure, (it is impossible that any man, whatever be the extent of his occupation, can grow every description of seeds,) and often suffers the loss of his best customers in consequence, besides paying heavy damages in some cases. It is equally certain to injure, in the long run, the wholesale business, as every retail dealer will do his best to render himself independent of the trade by purchasing directly of the grower what he can not produce himself?

These assertions we know to be true; and no man, aware of the facts, dares contradict them publicly. It is true that worthless seeds are killed—expressly for mixing; it is true that old seed unable to vegetate are sold for the same purpose; it is undeniable, moreover, that the greatest rubbish, although still alive, goes enormously into the market, either by itself, or mixed off with seeds of better quality; and, finally, as we have long ago shown to be the case, half a dozen different names are often sold at half a dozen different prices, pretending to be half a dozen different kinds, although they all come out of the same bag. And this is so true that no honest man can be found to deny it, unless he is a simpleton, utterly ignorant of the devices of dealers.

But what is the remedy for such a state of things?

It is suggested that we should follow the example of the *Lancet*, and buy up samples

of peas, and other seeds, as that paper bought up samples of tea and sugar, etc., and publish the results, thus exposing the fraudulent, and establishing the characters of the fair dealers. And if it were possible to tell, by simple inspection, whether a sample of seed is adulterated, as is the case with articles of food, we would readily undertake the office. But the nature of the objects to be examined renders the trial of seeds for any useful purpose a very difficult operation; they must be sown, grown, carried up to the state in which they are fit for use, and then, and not earlier, reported upon—a very different process from studying a sample under a microscope. Give a man of science a pinch of ground pepper, and in an hour he will tell you that it is made up of capsicum husks, brown mustard skins, flour of mustard, sago flour, rice flour, potato flour, ginger dust, and so on. But a pinch of cabbage seed can not be so examined; it may consist of turnip seed, rape seed, red cabbage, bastard broccoli, runaway savoy, or any such rubbish; but this can be ascertained only after many weeks or months. In the case of grass seeds, fraud would be difficult to prove legally, by any process whatever; for if it appears that the worthless annual poa comes up instead of, or among, the perennial poa seed, although there may be a moral conviction that fraud has been practiced, nevertheless there is so much possibility of error from natural accidents, that it would be next to impossible to make a clear case of dishonest dealing. Yet we entertain no doubt that this kind of falsification, that is to say, selling worthless annual for valuable perennial grasses, is of common occurrence.

Then it has been suggested that everybody should be his own seed grower. To us it seems as reasonable to advise that everybody should be his own sugar broker, or his own tea broker, or that every one should weave his own linen, so that he may be sure that the linen is linen, and not cotton in disguise. In the actual state of society, such propositions can not be seriously entertained; we will even add that in no state of society can a man be advantageously his own seed grower, except on the most confined scale. A gardener may have a very fine sort of cabbage, and if he allows no other cabbage or cabbage-like plant to

flower near him, he may perhaps succeed in obtaining some genuine seed; but if any other kind of cabbage flowers in his own or his neighbor's garden, he will only reap a crop of mules and monsters. And so of other things. Seed-saving must therefore be a special occupation, conducted under special circumstances. Crops must be so cut off from all other crops of the same or a similar kind, as to render mixture by muling impossible; and private individuals are not in a position to undertake any such a task.

The public, therefore, must seek another remedy, and that remedy is to pay tradesmen a fair price for what they sell. If a man can not live by his trade and be honest, he will abandon it; we need not state the converse of the proposition. If the public will persevere in the present ruinous race after impossible cheapness, the public must be content to suffer; and the public richly deserves it. The public deserves more; for it renders itself an accomplice in fraud, and is the great tempter who leads weak and low-principled men to the commission of offenses they would not have thought of. If a baker loses a loaf of bread, and it is shown that he so placed it in his window as to tempt the poor wretch who stole it, that baker loses his remedy; if a mercer, suspecting a customer of shoplifting, can be shown to have intentionally placed goods in the way of the person suspected, so as to tempt him to the commission of the offense, that tradesman finds it difficult to obtain a conviction, and in the opinion of all right-minded men, ought to be placed in the dock, by the side of the criminal himself.

But what is the difference between the baker and the mercer on one hand, and the public on the other? Both are alike tempters to fraud; the first put their goods in the way of the people whose necessity overcomes their sense of right; the second insists upon having goods at a price at which they can not be sold without fraud. In the one case the dealer tempts his customers to dishonesty, in the other case the customers tempt the dealer.

Does any one believe that the poor grocer who incurs the risk of an excise prosecution, and of a fine of £100, by selling a half-penny worth of adulterated pepper, would do so if he could live otherwise?

But this man is required by his customers to sell for  $\frac{1}{2}d.$  what would cost him  $\frac{3}{4}d.$  if it were genuine; to avoid ruin, he commits a fraud by which he gains  $\frac{1}{2}d.$  instead of losing one.

The world does not see the analogy between all these cases; it is more fitting that it should be pointed out. The curse of our age is the eagerness with which everybody attempts to knock down prices beyond that they can bear, if commerce is to remain honest. The economist's maxim "to buy in the cheapest market," is wretchedly misapplied, and Great Britain is the victim. Low prices must end in low position. Of this at least we may be sure, that so long as men pray not to be led into temptation themselves, and at the same time fix their whole thoughts upon leading others into temptation, fraud will be triumphant, and gardeners' must suffer like other people.

The following is the letter referred to above:—

"SEEDS.—Some time ago, the editor of the *Lancet* sent agents to the dealers in coffee, tea, etc., to purchase samples to be tested, and afterward published the names of the parties whose goods were not adulterated. I have been thinking that if the editors of the *Gardener's Chronicle* were to adopt the same course with regard to seeds, how many of our wholesale seedsmen would figure as dealers in genuine articles of first-rate quality? My own conviction is, that no firm could sell really good seeds at the price usually asked, without being utterly ruined. That this, in the end, must destroy in a great measure the trade in seeds, is beyond a doubt; we can hardly suppose farmers to be so stupid as to continue to pay for samples not only second-rate in quality, but of which twenty-five or thirty per cent. are never intended to grow. Take clover seed, for instance—can it really be necessary to sow the large quantity per acre usually sown, if the seed were good? ought we not to expect half the amount to produce a crop? Then, with regard to turnip seed; perhaps the most important article purchased by farmers, it is impossible to keep a first-rate stock up to mark, without transplanting every year; this makes it a two year's crop. The turnips are sacrificed, and also the barley crop afterward. The expense of pull-

ing and replanting the turnips is great? No seed is more expensive preserving from the attack of birds; the straw is of no value as manure. Now what price can this seed be grown for? As a large grower, I can speak with confidence, that it can not be grown for less than 20s. per bushel; if the crop is a bad one, it often costs 25s. or even 30s. Swede turnip seed has been offered to me by some of the largest houses in the trade at 15s., 12s., and 8s. per bushel; now how is this done without serious loss to the seller? I can show how it may be brought about. In the first place, turnip seed may be sown as a stubble crop, so as to be large enough to stand the winter, though not sufficiently large to transplant; for transplanting is of no use if the turnips are not of sufficient size to judge of their quality; this reduces it to one year's crop. Then seed may be purchased in any quantity, warranted not to grow, which may of course be mixed to any extent. Perhaps some persons may not believe that this is not generally the case; let them prove it is not, for themselves. Every seed in a genuine sample of turnip, cabbage, or similar round seed, will grow; nay, more—a great part of the small seed which flies before the blast of the winnowing machine will vegetate. If, therefore, a given quantity, say twenty-five or thirty seeds, be sown in a pot, and preserved by any means from the attack of birds, the fly, etc., every seed which does not grow may be put down as either too old or as previously killed. Now, how is the farmer affected by this state of things? It requires one and a half to three pounds of seed to produce an acre of turnips; this might be sold one year with another, by a person who made it his whole business to produce the best samples which could be grown, at 9d. per pound; and it is difficult to see how he could pay the necessary expenses of sale, give the usual credit, and live by his business, at a less price. The cost therefore to the farmer is 1s. 1½d. to 2s. 3d. per acre for seed—a most inconsiderable sum, when we take into account how much depends upon it in value of the crop produced. He had better pay 20s. per pound for good seed than have had for nothing; and yet there are men who will risk a crop of turnips to save 3d. or 6d. an acre in the price of the seed. Many persons will say, why not grow our

own seed? A very natural question; but is it advisable that the division of labor in this case should be done away with? Is it advisable that each farmer should breed his own rams, or that all should be breeders of first-rate bulls? Is it not better that a class should devote their time and attention exclusively to one object for the benefit of others? And will they do so unless by it their own interest is served? If the supply were dependent on farmers alone, would it not be irregular? When keep for sheep and other stock was scarce, there is reason to believe few would be planted for seed, as it can not be judged, as in the case of corn, by the eye; the farmer's customers would be his neighbors, and if he produced more than they required, would not the old seed remain on his hands, and in time reach them in place of new? Is it to be supposed that a small grower would generally take the same trouble with a crop of this description, as a man who made it his sole object? or that he would take pains to produce a new variety during seven or ten years, as a man in a large business will do? It can not be expected; and no farmer will deny that a man like Mr. Skirving, of Liverpool, has done good in raising a superior turnip. In addition to losing the advantage of change of seed, it is very doubtful if it is not more expensive to grow than to purchase a small quantity.

A. L."

#### Skirret.

SKIRRET is considered a nutritious vegetable perennial, a native of Asia, and has been cultivated in Europe about two hundred years. The roots are composed of long, fleshy tubers, joined together at the head or crown. Skirret is cooked and eaten like salsify. The leaves decay in autumn, and the roots continue to be fit for use until the regrowth of early spring. This plant may be raised from seed or offsets. Its flavor is not unlike that of the parsnip, and by some is much preferred. Offsets are usually taken from the old roots, and planted very early in the spring before they begin to shoot. The greatest objection to the market gardener in the raising of this root is, the large space of ground required for its perfection.

**Culture.**—Such soils as are suitable for the carrot would produce the skirret. The

seed must be sown from April 1st to May 1st, in drills half an inch deep and ten inches apart. A few radish seeds should be sown in the drills to distinguish them, so that the weeds may be destroyed before the skirret should appear above the ground. In about six weeks thin them out to six inches apart. Absence of weeds and frequent stirring of the soil, are their principal requisites. They require phosphates and potash. Some gardeners take them up on the approach of a hard frost, and clean and stow them away in sand or dry earth, like the modes recommended for preserving carrots.

To save seed, let a few of the old roots run up in the spring, and they will flower in July and ripen their seed in the autumn.  
—*Working Farmer.*

#### Tropical Vegetables.

OUR FRIEND, Lewis Gaines, of the *Tropical Farmer*, Ocala, Florida, is already giving us an earnest of his promise to make us acquainted with some of the valuable products of the Southern Peninsula. Three valuable articles are introduced here from his pages.—Ed.

THE CASAVA grows here finely. Our neighbor, Mr. McInty, tells us it grows best upon our best land, and is as good or better for table use than potatoes. Hogs are so fond of it that when once they get a taste of it they can with difficulty be kept out of the field. On rich land, it will make from three to seven large roots, sometimes four to six inches in diameter, and from three to six feet long. These are prepared for the table much in the same way sweet potatoes are. He says they yield more starch than the arrow root, and it is easily extracted; after digging and washing roots, he runs them through the rollers of the sugar mill, which takes out all the starch, leaving the woody fiber. This he says is the cheapest plan of obtaining the starch from arrow root, feeding by means of a sort of shoe constructed for the purpose. The Casava comes from the eye on the stock, and never from the root; the ground is prepared by plowing and opening a deep furrow every four and a half feet, and checked off with a roller or scooter two and a half to three feet, dropping one cutting with two or three eyes in

each of the checks. But one stalk will come from the cutting; as soon as one eye begins to lead, the balance perish. Cover with the plow or the hoe pretty deep. The cultivation is much the same as corn or cotton; at first plow and hoe and keep clean; as soon as the roots begin to spread, the plowing must be stopped; as the roots all run near the surface, they are easily pulled up in saving by pulling up the stalk. The stalk is saved for seed much like saving sugar cane for seed, by putting in heaps and covering with straw or leaves, and a layer of dirt. The yield is immense, though the roots are not in a shape to be measured.

**THE TANIER.**—Mr. McIndustry cultivates for table use the Tanier, a species of flag, with a bulbous and esculent root; when prepared, it is much the same taste of the Irish potato. This is indigenous and grows spontaneously on wet lands. When planted on rich high lands and cultivated, its flavor is much improved. This is a favorite vegetable with those who are accustomed to eating it; it yields an abundant crop, and hogs are extremely fond of it.

**THE ARROW ROOT** is indigenous to south Florida, and is a valuable market crop, as well as one among the best crops for hogs that can be planted; every farmer should have a small patch, if only for his hogs. Of this crop, more at another time.

#### Liquid Manure.

THERE is nothing in the able report of the Board of Health, of more horticultural importance than the evidence collected on the mode of applying liquid manure. Not that it contains anything new upon the subject, but because what it does contain is well put, and ably illustrated. Our own columns bear ample testimony to the difficulty of impressing upon the minds of gardeners the extreme importance of employing such fluids in a state of great dilution; for, notwithstanding our repeated warnings, and the wise practice of their neighbors, men are still to be found so unintelligent as to insist upon using strong liquid manure. "How strong may I make it?" says one correspondent. "Of what use is it, if it be weak?" writes another. "Why can't I put on plenty at once, instead of being always at it?" demands a third. In vain we advise, in vain

we point out reasons; we find the same class of questions incessantly repeated. Let us hope that the following quotation from the report before us will assist in dispersing the mistiness which still hovers over some portion of the horticultural mind:

"Sir Joseph Paxton collects the manure water from water-closets, horse-dung linings, and various other sources, into large covered tanks; the waste also from a small bath is emptied into one of these, by which means the solution becomes very thin. The liquid so collected passes almost immediately into a state of incipient or partial decomposition, and thus becomes fit for the food of vegetation; when drawn off for use, it is always greatly diluted with water, and never supplied except when the plants are in a state of activity and growth; otherwise he considers the effect would in many cases be prejudicial, rather than otherwise. It is used by him liberally to vine borders, peach-trees, melons, cucumbers, pines and other fruits, with the most powerful and satisfactory results; in fact, the use of plant food in a liquid state, if properly prepared and administered, supersedes in a great degree the necessity for manure in a solid form; and the produce in favor of the liquid greatly preponderates, being both larger in quantity and weight, richer in color, and superior in flavor.

"These advantages, however, could not be secured with certainty, unless the solution were so prepared as to suit the habits and requirements of the various plants to which it is supplied. This preparation is of two kinds:—first, by diluting the liquid sufficiently with water to prevent the spongioles of roots becoming glutted with too great a supply of food, and secondly, rendering it of a proper temperature by the addition of hot water. Pines require the liquid at about a heat of 80° Fahrenheit, and other plants in proportion; fruit trees, and other open air products, however, do not necessarily require the addition of hot water to the same extent as in-door produce, but are, notwithstanding, much benefited by receiving it in a moderately warm state. Experience has, however, shown, that for ordinary crops, sewerage in its usual state is the most valuable manure that has yet been introduced."

The whole art of liquid manuring, is, in fact, comprehended in the foregoing extract.

Let the manure be extremely weak ; it is idle to ask how weak ; liquid manure owes its value to matters that may be applied with considerable latitude ; for they are not absolute poisons, like arsenic and corrosive sublimate, but only dangerous when in a state of concentration. Gas-water illustrates this sufficiently well ; pour it over a plant in the caustic state in which it comes from gas-works, and it takes off every leaf, if nothing worse ensues. Mix it with half water—still it burns ; double the quantity once more—it may still burn, or discolor foliage somewhat ; and if it does not, much of what falls upon the plant is necessarily lost. But add a tumbler of gas-water to a bucketful of pure water, no injury whatever ensues ; add two tumblersful, and still the effect is salubrious, not injurious. Hence it appears to be immaterial whether the proportion is the hundredth or the two hundredth of the fertilizing material. Manuring is, in fact, a rude operation, in which considerable latitude is allowable. The danger of error lies on the side of strength, not of weakness. To use liquid manure very weak, and very often, is, in fact, to imitate nature, than whom we can not take a safer guide. This is shown by the carbonate of ammonia carried to plants in rain, which is not understood to contain, under ordinary circumstances, more than one grain of ammonia in one pound of water ; so that in order to form a liquid manure of the strength of rain-water, one pound of carbonate of ammonia would have to be diluted with about 7,000 pounds weight of water, or more than three tons. Let us not be misunderstood. We do not mean to say that any such dilution as this is absolutely necessary ; we only point to the very significant fact, that in the operations of nature, dilution is enormously beyond what cultivators usually dream of.

Let such manure be applied only when plants are in a growing state. In addition to Sir Joseph Paxton's evidence, and to the general notoriety of this rule, may be usefully added a statement made by Mr. Mitchell, Lord Ellmere's gardener, and quoted by the Board of Health. This experienced cultivator says :

"That he has never seen manure produce so good a crop of strawberries as the liquid (i. e. town and sewer manure,) has this year done at the Worsley Hall gardens." "Ma-

nure," he adds, "often causes a crop of strawberries to be lost, by forcing the growth of leaves. Liquid may be applied just when the plants are forming their flower buds, and the strength of the manure spent in producing fruit, not leaves. When the plants are bearing, it could be seen to a plant how far the irrigation had extended."

Indeed, it should be obvious, that since liquid manure owes its value to its being in the state in which plants can immediately consume it, to administer it when they are incapable of consuming it, that is to say, when they are not growing, is most absurd. This is, however, a point concerning which more requires to be said than we can today find room for.—*London Gard. Chron.*

### The Early Mandan Corn.

(*Zea mays v. praece.*)

In his "Genera of North American Plants," Professor Nuttall, who visited the Mandans and named this variety, says : "Stem, very low, spathes arising from the base of the culm"—in other words, keeping comparatively close to the ground, in accordance with a principle often obtaining among other plants that extend into severer climates—that of shortening their stems.\* He adds "successfully cultivated by the aborigines of the Missouri to its sources [?] ripening in a climate where no other variety could exist."

George Catlin, also, in his "Illustrations of the Manners, Customs and Conditions of the North American Indians," says, "The Mandans raise a very small sort of corn, the ears of which are not longer than a man's thumb. This variety is well adapted to their climate, as it ripens sooner than the other varieties, which would not mature in so cold a latitude."

It is generally understood that Indian corn indigenously is a tropical plant, though

\* Thus the bay-berry or wax myrtle, grows two or three times as high in South Carolina as it does in Western New York ; and the gigantic live-oak of Florida dwindles to a shrub on the eastern shore of Virginia.

In regard to Indian corn extending into higher latitudes—the earliest ears will be the most perfect, and the later be cut off by the frost. So in selecting seeds for the kitchen garden, the finest and earliest specimens are generally preferred ; and though the change from year to year may be slight, yet the accumulation of changes in the course of an age may be very considerable.



the Pilgrims who landed on Plymouth Rock found it cultivated by the Indians in that vicinity; but why it has been acclimatized further north on the Missouri than in any other region, the following remarks from Catlin's work may assist in explaining, though he has not referred to this subject.

"I have descended the Missouri river from the Mandan village to St. Louis, a distance of eighteen hundred miles, and have taken pains to examine its shores; and from the repeated remains of the ancient locations of the Mandans, which I met with on the banks of that river, I am fully convinced that I have traced them down nearly to the mouth of the Ohio river; and from exactly similar appearances, which I recollect to have seen several years since, in several places in the interior of the state of Ohio, I am fully convinced that they have formerly occupied that part of the country, and have from some cause or other, been put in motion, and continued to make their repeated moves until they arrived at the place of their residence at the time of their extinction on the upper Missouri.

"The marks of the Mandan villages are known by the excavations of two feet or more in depth, and thirty or forty feet in diameter, of a circular form, made in the ground for the foundation of their wigwams, which leave a decided remain for centuries, and one that is easily detected the moment it is met with. After leaving the Mandan village, I found the marks of their former residence, about sixty miles below where they were then living, and from which they removed (from their own account) about sixty or eighty years since. Near the mouth of the big Shienne river, two hundred miles below their last location, I found still more ancient remains; and in as many as six or seven other places between that and the mouth of the Ohio, and each one, as I visited them, appearing more and more ancient, convincing me that these people have gradually made their moves up the banks of the Missouri."

George Catlin further remarks that after the season for green corn is over, "the remainder is gathered and dried on the cob before it has ripened, and packed away in *caches* (as the French term them)—holes dug in the ground some six or seven feet deep, the insides of which are in the form

of a jug, and tightly closed at the top." Now it is remarkable that "the Pilgrims" found Indian corn buried in the same manner, soon after their arrival at Plymouth; and Catlin might have found in this circumstance an argument in favor of his theory; for two tribes living three thousand miles apart, in all probability, derived this singular custom from the same source. D. T.

—*Albany Cultivator.*

#### Number of Plants per Acre.

THE following table may be useful to the gardener, in showing the number of plants or trees that may be raised on an acre of ground, at given distances apart, when planted at any of the undermentioned distances.

Distance apart.	Number of Plants.
1 foot.....	43,560
1½ feet.....	19,360
2 ".....	10,890
2½ ".....	6,969
3 ".....	4,840
4 ".....	2,722
5 ".....	1,742
6 ".....	1,210
9 ".....	587
12 ".....	306
15 ".....	193
18 ".....	134
21 ".....	98
24 ".....	75
27 ".....	59
30 ".....	48

#### Marine Glue.

PRACTICAL horticulturists are well aware how soon many substances employed in gardens become decayed; for example, wood, the cords of straw mats, cloths, canvas shades, etc. Means of preventing this have been long sought after, but all hitherto tried have imperfectly answered the purpose. It appears that the difficulty is at last surmounted, and that the marine glue affords an almost indestructible coating for wood, iron, canvas, and other substances which are injuriously affected by long contact with air and moisture. A widow lady, Madame Audouin, who takes an interest in manufactures, has lately presented to the Central Horticultural Society at Paris, some specimens of cloth and canvas adapted for horticultural purposes, which had been prepared with marine glue, and which she said would last, exposed to all weathers, for almost any length of time. The president of the society, thinking that this invention

would prove of great use, nominated a commission for verifying the statements announced by Madame Audouin, and its report has been highly favorable.

Marine glue, invented by Mr. Jeffrey upward of ten years ago, is a substance resembling pitch in its composition, and possesses all the qualities of the latter without its faults. It is as insoluble in water as pitch, and it does not melt with the heat of the sun, neither does it scale and crack by contraction from cold. It glues pieces of wood together, with great firmness, is impervious to water, and according to the preparation which it undergoes, it has the property of being either inflexible, or pliable and elastic; and it may be thinly used as varnish for any article to which its application would be desirable. It has been experimentally employed for several years, and every year affords additional proof of its utility. M. Pepin, botanic gardener at the Museum of Natural History, assisted by some members of the Central Society of Horticulture, has given much attention to the use of marine glue. Five hundred props of oak and chestnut have been in the ground some two, and others three years, without the slightest change. Various land-owners and horticulturists, and among them the Duc de Rohan, and M. Bella, of the Agricultural Institution of Grignon, have had cloths, canvas, and wood work prepared with marine glue, and have acknowledged the beneficial results. The trials made at the museum have been equally satisfactory. We ought, therefore, to consider this composition as a great acquisition, and doubtless its application to horticultural purposes will soon be general. It will save much of the expense which is every year incurred by the deterioration of a considerable portion of articles used in gardening.—*Revue Horticole*.

#### French Gardening.

In general horticulture France is behind England; though we think that the *Jardin des Plantes*, at Paris, by its methodical system of arrangement takes precedence of Kew as a botanical school for the student—those systematic arrangements in the vegetable, medicinal and arborescent departments are in detail and explicit. They may not be in such beautiful and picturesque order as at

Edinburgh, but they are decidedly before Kew. The flower markets, with their profusion of common-place things, may strike the uninitiated as grand, but to the practical eye the produce is inferior—but the detail and arrangement is good; everything *got up* for show. The roses were displayed before us in seas of beauty, wave upon wave they came rolling along—but for intrinsic beauty, the bouquets of Covent Garden surpassed those of the Flower Quays. The pine-trees in the Garden of Plants are of far superior growth and more symmetrical than those in the vicinity of London. As you enter Kew, you are struck with a good specimen of *Abies Sabina*, with its peculiar soft sea-green, but when you see the same in the Garden of Plants, you have to pause and admire its clothed symmetry—so with many others.

The Rose Nurseries of Paris are inferior to those of Orleans, Angers and Lyons. They propagate the fine kinds in quantity, by budding only. The following among many, were very beautiful, in fact irresistible: Baron Halley, Noemie, Louise Peronet, Chateaubriand, Caroline de Sansal, Pius 9th, Julie Krudner, Madame Trideaux, (an American variety and highly esteemed in France,) Rosine Margottin, Geant des Batailliers, Baron Prevost, Madam Rivers, Standard of Marengo, Julia Margottin, Auguste Mie, Eugene Sue, Doctor Julliard, William Griffith, and some others, among the now popular class of hybrid perpetuals to which all the above belong. The Bourbon family are also great favorites; however, it was not an easy task to find rivals for *Souvenir de la Malmaison* and *Boll's Henry Clay*; *Teas*, *Bengals* and *Noisettes* are overlooked; they are not generally hardy in England, (which is the great mart for French roses,) some of the English nurserymen purchasing from four to ten thousand plants in a season.

The gardens of the peasants are judiciously stocked with a few select pears, a few grapevines, and a few select standard roses. The railroad crossings and stations are all decorated with roses and fruit trees; the latter cultivated as pyramids, trained in conical form, and with generally fair crops. They are more judicious in their selections than our American friends; they prefer few and fine sorts, known as certain bearers.—*R. Buist, in Philadelphia Florist*.



## The Vineyard.

### GRAPE REPORT, ON N. LONGWORTH'S COLLECTION.

DR. WARDER:—The casualties to which the Catawba, as yet our best wine grape, is liable in this section of country, have lately awakened the attention of our vine-culturists to the subject of new varieties, in the hope that some new and untried kind may be found, equally good for wine, and of a more certain and hardy character. With this view, it is well known that Mr. Longworth has, for several years past, advertised for new varieties of native grapes, to be sent him by mail or otherwise. In consequence, he has already been able to collect nearly one hundred samples from different parts of the United States; many of which have been grafted on old stocks, to bring them the sooner into a bearing state. And as many of the readers of the Horticultural Review must feel an interest in the result, I send you the report of a test, made by seven gentlemen, connoisseurs in the grape, who with myself were politely invited by Mr. L. to visit his plantation and examine carefully some thirty kinds which were in fruit and at maturity, on the first of October, of this year.

1. *Singleton*.—From Virginia; resembles very much the Catawba; thin skin, little pulp; excellent; believed by a part of the committee to be Catawba.

2. *Zane*.—Said to have been found on an island in the Ohio river, below Wheeling; in color and form it resembles Catawba; a very delicate, juicy grape, with less of the Foxy taste than the Catawba.

3. *Graham*.—From Indiana; resembles the Schuylkill Muscadell, or Cape, but pronounced inferior.

4. *Pennsylvania*.—Resembles Isabella, but inferior in quality.

5. *Thatcher's*.—A native of Ohio; a very fine table grape; resembles the Herbemont in the berries, but the bunches are smaller.

6. *Seedling Isabella*.—From Virginia; more pulp; not so good as Isabella.

7. *Arkansas*.—From that state; in all respects like Catawba; believed to be the same; not certainly known to be indigenous to Arkansas.

8. *Fox*.—Purple, large, but a poor Fox grape.

9. *Herbemont's (Madeira)*.—Vigorous, healthy vine; bunches large, shouldered; berries small, purple, compact; skin thin; no pulp, but juicy and vinous; an excellent table grape, and yields a wine resembling Spanish Manzanella.

10. *Wine*.—Considered a good pleasant grape for table.

11. *Marion*.—Resembles Isabella, prob-

ably a seedling from it; berries and bunches larger; it is superior as a table grape, an abundant bearer, and ripens uniformly.

12. *Lebanon Seedling*.—Resembles Catawba, pronounced the same.

13. *Cleveland*.—Black, round, with little pulp; a dark red juice, with a peculiar musky flavor, rather agreeable.

14. *Hotchkiss*.—One of the best of the Fox grapes.

15. *Clermont*.—Resembles Catawba in color; a delicious table grape.

16. *Davis*.—From Kentucky; resembles Catawba; less aroma, more acid; large and vigorous grower.

17. *Sherman*.—Like Isabella, but inferior.

18. *Cleveland Catawba*.—Not genuine; inferior.

19. *By Express*.—Locality not known; a small white grape; bunches small; tastes like Sweetwater.

20. *Lee's*.—Resembles Isabella; very good.

21. *Blue Black, Chillicothe Seedling*.—Dark purple, oval berries, but not good as Isabella, which it somewhat resembles.

22. *Diana*.—From Massachusetts; seedling from Catawba; smaller, paler, less pulp, thicker skin; juice sweet and pleasant; judged not equal to Catawba, as far as tested here.

23. *Hyde's Eliza*.—Resembles Isabella; good.

24. *Delaware County*.—A small grape; color like Catawba; bunches small; skin thin, delicate, transparent; juice brisk, and vinous; and judged one of the very best table grapes. Vine resembles a foreign grape. It has been pronounced by several German vine men to be identical with their *Tram-mer* (?) one of their best wine grapes. The vine is said to have been cultivated in New Jersey for sixty years, and twelve years in Delaware county, in this state, and is as hardy as the Catawba. Was sent from Eu-

rope to a foreigner in New Jersey, by a brother of the person to whom sent.

25. *Clarkson*.—A small, black grape; excellent for the table.

26. *Imitation Hamburg*.—Very large; dark purple; resembles black Hamburg in appearance, but inferior in quality; an American vine. Mr. Longworth adds: "I should say grape as large, skin as thin, pulp as soft and juicy, but of inferior aroma and flavor to the Black Hamburg. Evidently a native grape, but its origin is unknown."

27. *Missouri*.—Small black grape; bunches loose; skin thin; little pulp; good for the table. Mr. Longworth says: "A fine wine grape where brandy is added, as is done with the Maderia wines, which it resembles."

As it was the first time that many of the above vines had produced fruit, and some only in small quantity, a very accurate judgment could not be formed in a single season; age and cultivation, with different soils and exposure, may change their qualities materially. From several Mr. Longworth will express the juice, and be able to form a partial judgment of their qualities for wine.

S. MOSHER.

REMARKS.—It should be understood that most of the names used in this communication are those applied by Mr. Longworth, for his own convenience, and generally indicate the place whence or the parties from whom the cuttings were received. Since the date of the inspection now reported, Mr. L. has made wine from many of the varieties, which he proposes soon to subject to the judgment of wine tasters.

#### Girdling Grapes.

DR. DANA, of Holderness, exhibited grapes at the New Hampshire Agricultural Society's Fair, October 6, 1852, that do not usually come to perfection in the open air, fully ripened and of unusual size; they had been girdled, and the result showed with success.—*Jour. of Agriculture*.

## KEEPING WINES.

THE division of wines into three grand heads, of *dry*, *sweet* and *luscious*, would perhaps be the best method of classing them while treating of their qualities. But the terms of dry and sweet having been adopted customarily, it may be as well to follow the general rule for the sake of simplicity; as the subdivisions from these two heads may be made to include the thicker and more luscious under the generic term of "sweet," as well as the more meager in sugar under that of "dry" wines. . . . It is singular that good wines should be made under multifarious modes of treatment. . . .

The process of fermentation is carried on in many different modes, not regulated by locality or climate; and wine of excellent quality is produced under each. It seems difficult to decide which mode is to be preferred. The first requisite to make good wine seems to be a peculiar quality in the soil in which the fruit is grown, more than in the species of vine itself. Every treatment after the vintage, is secondary to this. The quality in the soil which operates upon the plant, so genial in some spots, yet scanty and confined in limit, is in its precise nature unknown. The general character of the soils friendly to the vine is always familiar to the reader, but the nature of the influence possessed by one small spot in the same vineyard over another, as exhibited in the production of several choice varieties of vine, will perhaps forever baffle the keenest spirit of inquiry.

The second requisite to good wine is the species of plant, aided by a judicious mode of training and cultivation. On the whole, it appears that to refrain from attending to the soil at all, is better than to overwork it. Three-fourths of all vines are grown on hills, and wines of the first character are made from those that flourish among stones and pieces of rock, with little attention more than occasionally raking the ground between them where it is possible to do so. Hermitage was first grown among granite rocks and stones, broken smaller by art, and little or no dressing was used. On the other hand, no wine of tolerable quality is grown on rich, highly dressed land. This may be taken as of equal truth in the north and

south. It is remarkable also that the quantity of must afforded in different situations in all respects similar, differs much; and that on approaching the south, the quantity rather diminishes, as if with the increase of the saccharine principle of the grape. Thus in the department of the Meurthe, in France, the quantity of wine per hectare is never under 50.64½ hectolitres, examples of two hundred are on record; an incredible quantity. Reckoning the hectare at two acres and a half, and the hectolitre at twenty-six gallons, this amounts to upward of twenty-two hundred gallons for the English acre. On the other hand, the produce in the Cote d'Or only averages 22.81 each hectare, and only ten or twelve for the richer wines; while the poor wines of the Seine and Oise yield 52.13½. The species of plant which is a favorite in one district, is discarded in another. In making the drier wines, the species seem more regulated by caprice than judgment; while for the luscious, the rich grapes of the east are cultivated in preference, from their abounding so much in sugar.

The fermentation is carried on in troughs, vats or casks in all countries, covered or open, or in France with the apparatus of Gervais. This last mode is recommended because the inventor supposes it retains the strength and aroma of the wine. But a far better method is adopted in Tonneaux à Pottes. It is argued by some that the process should be as quick as possible, and by others that it should be slow; while each pursues his own method. Effervescing wines, in Champagne, are casked soon after the fermentation commences, and the must is not allowed to free itself of carbonic acid gas, nor to remain in the vat but a few hours; nor is it raked until the Christmas after the vintage. In the Ardeche, on the contrary, the wine of Argentiére designed to effervesce remains in the vat twenty-four hours; the must is raked into large bottles and decanted every two days, until there is no further appearance of fermentation, and then bottled, corked and sealed. The effervescing wine of Arbais, once so celebrated, is made by suffering the must to remain from twenty-four to forty-eight hours in the vat, until a crust of the lees is formed as thick as

possible before the fermentation begins. The moment gas bubbles ascend it is racked again, and the double operation repeated until the must is limpid. It is then casked, and until the fermentation is complete kept full. When the fermentation ceases the cask is bunged. It is several times racked, and once fined, before the following month, when it is bottled. Here are three modes in one country of making *Mousseux* wine; nor can the best wine of the three settle the question which mode is preferable, as the growth may cause the difference in the goodness of the product. Other modes might be cited; but the preceding will exhibit to the reader, in a clear point of view, the variety of treatment to which wines are subjected, he will find others himself, if he wishes to follow the comparison further.

Neither with red wines is there any uniform treatment. The fine Burgundies of France are managed in the simplest manner, while great labor is bestowed upon wine of very inferior character. Some wines are left but a few hours in the vat, as in the Cote d'Or; others remain, as in Lyonnais, six or eight days or more, and at Narbonne even seventy. Nor does any difference of product prove the discrepancy between one mode of treatment and another, where the wines are good. This being the case with every class, it may reasonably be inferred that much less of the peculiar excellency of wine attaches to its treatment after it enters the vat than is generally imagined. When the must has been judiciously placed in a state ready for fermentation, after due care has been exercised, the simplicity of all which remains to be done, and very frequently the opposite methods adopted from caprice or custom, to make it ready for the market, tend to substantiate this opinion; not that they exclude improvement in numerous existing cases of management.

Secondary, or "insensible fermentation," as it is called, takes place in the cellar. This fermentation, from an exposure to an exciting cause, sometimes becomes acetous, and spoils the wine. To this mischief distinct allusion is necessary, in order to point out its prevalence. This it is which, if neglected, most commonly brings on the principle of decay that had until then been resisted, and which would be so longer were the due balance and proportion of the substances in

the wine correct at first, and the transition of the tartar and sugar perfect. Durability in the cellar can only be insured by the change of the sugar into alcohol to such an extent as to afford the necessary resistance. Where the sugar is great in quantity, the wine is less liable to turn acid in the bottle, if the fermentation in the vat has been good. Weak wines in which the tartar is predominant and the principle of preservation feeble, are often lost irrevocably before the owner imagines it possible. It is against this degeneration of the wine that the purchaser or consumer has more particularly to guard, as of all the accidents to which wines are liable after leaving the grower's hands, to fall into the acetous fermentation is the most common.

The wine cellar should, if possible, face the north; and in England consists of two divisions, one of which should be some degrees warmer than the other, for there are many wines which do best in a cellar of high temperature; Madeira, Sherry, Canary, Malaga, Syracuse, Alicante, Cyprus, and others keep better in warm than in cold cellars. The wine of Portugal is so hardy, that even the cellars under the streets of the metropolis will little injure its quality; but this is not the case with other kinds. The wines of Bordeaux, Champagne, and of the Rhine, should be kept in cellars where no motion can affect them, far from the vibrations or rather trembling of the earth from the travel over granite pavements. They should be as far removed from sewers and the air of courts where trades of a bad odor are carried on as possible; these in wet weather do not fail to affect the wine and give a tendency to acetous fermentation.

The quantity of wine in a cellar must be regulated by the rate of consumption in each class, so that too large a stock may not be kept of such as are least durable. This, in a large establishment where a curiosity in wines is indulged, is a matter of much importance. The details, however, do not come within the scope of this article. They are easily regulated by attending to the history of each particular wine, and the length of time since the vintage in which they were made.

The choice of wine is a very difficult task, especially for the uninitiated. The difficulty is twofold: in the first place, no two persons

have the same ideas of flavor of any particular wine; secondly, the wines of the same vineyard differ in different years; age, care in keeping, or accident, cause a change in the flavor of the same class of wine, perceptible to an amateur, though little noticed by strangers not accustomed to the variety. A purchaser should always, if possible, choose for himself the wine which is most agreeable to his palate. There is a good deal of pretension in the general taste for wine, and it has been asserted that oftentimes the worst judge complains first of the quality of the wine set before him. At one moment the example of a fashionable person will make a wine, held in very little estimation before, and perhaps very worthless in reality, the prime wine of the table for a season. In England, fashion or accident, and not the true regard for vinous excellence, is what makes the demand considerable for any particular species.

The first object to be attained in choosing wine, next to the taste meeting the approbation of the purchaser, is its purity. Whatever be the country from whence it comes, whatever the class, if it be adulterated with anything foreign to its own growth, it ought not to be selected. To distinguish genuine wine from that which is mixed requires great experience, when the species to be judged is of a second or third-rate class. The bouquet may be imitated, and even the taste, unless long practice has habituated the purchaser to a nice discrimination. It is needful to know whether new wines will keep or change, and to what alteration the flavor will be liable. Without this knowledge, great loss may be sustained by a purchaser. Wines may appear good and bright, which will not keep a year; and others, that at first seem by no means deserving of preference, may prove in the end excellent. The private purchaser has no resource then but in the dealer of extensive connections and high character; while the dealer himself must acquire by long experience and nice observation the necessary qualification.

The taste is the criterion by which a judgment is to be formed; but a taste in wine which can be depended upon is a rare gift. The particular impression on the sense is so liable to alteration by the state of the bodily health, or by the last substance taken into the mouth, that it is difficult to depend up-

on. Sweet or spiced food taken a good while before will affect the judgment. Many recommend cheese; but after that all wines have an agreeable relish, while those who are in the habit of drinking strong wines or spirits lose entirely that nicety of taste so requisite in judging of the superior product of the purest growths. A habit of tasting the superior wines will alone give the healthful palate the power of discriminating minute differences in the aroma, bouquet and *seve* of the choicer kinds. Such a palate judges by comparison of what ought to be found in the best growths; and the opinion is formed by an effort of memory upon previous sensation. Good wine is most frequently found among capitalists who can afford to buy up large quantities in favorable years, the cheapest mode of purchase, who can bottle as it may be deemed most fitting for the contents of their cellars, and who have a reputation to lose. The peasants' wines, on favored spots, do not bring a good price, because the owners have not capital enough to make them in the best manner, or keep them in stock until it is most eligible to offer them in market. The same rule holds good with the merchant.

The higher classes of wines are transported to the purchaser with great care. The best season for removing the more delicate wines of France, and indeed wines of every kind, is the spring and autumn, when the weather is temperate. Cold or hot weather is equally prejudicial to the carriage of most wines. If transported in wood, they must be racked before they are removed; if in bottles, they should be decanted. Due precautions are taken to guard against the frauds of carriers on the continent, by running plaster on the heads of the casks and covering them entirely with hoops. The transport in cases, of the high bottled wines, is most generally adopted. These cases are strongly put together, and carefully packed, each bottle being bedded in straw, after having been previously wrapped in cartridge paper. With Champagne the case is also lined throughout, to guard as much as possible against atmospheric influence. Champagne wine sent to America is embedded in salt, so that it is kept always cool. In this mode, bedded in salt and straw, in very tight and strong cases, Burgundy has been successfully transported to India. The wine

should be left in the cases until the moment it is wanted for use.—*Redding on the Vine.*

#### Indiana Vine Culture.

THERE are very many localities in our state admirably calculated for the culture of the grape and the production of wine. The largest vineyards in the state are in Vevay. Some of them comprise a number of acres. The quantity of wine manufactured is very considerable, and the quality very superior. There are hundreds of hills along our Wabash fit for nothing else but to grow grapevines, and were they planted with vineyards, would not only add much to the beauty of the scenery, but also largely to the pleasure and profit of the owners of lands that are now comparatively worthless. As an instance of what can be done in this business, the new village of Hermann, Missouri, has about two hundred acres planted with 200,000 grapevines, which will yield 25,000 gallons of wine in ordinary years, and 50,000 gallons in years of good grape crops. An acre of land in vines is worth \$1000.—*Vincennes Gazette.*

REMARKS.—Had friend Caddington consulted the Census Tables or traveled in parts of the state near the Ohio river, he might have learned that Switzerland county, and especially near Vevay, is no longer celebrated for its wines; others, such as Clark county, have outstripped it in this product. This has been corrected in Mitchell's School Geography, but scarcely anywhere else. Many parts of the state may be equally well adapted to this crop.—Ed.

#### Protecting Grapes.

MR. EDITOR:—Just a word from a live grape grower, "down east," who raises bushels of nicely ripened Isabellas every year. I have six hundred bunches on two vines this present moment, good size, finely colored, but *not ripe* by a "long sight" yet. They will remain on the vines until October 20th or 25th, and if they freeze together I shall not be alarmed. I gathered a bushel the last year, and the bunches were frozen up fast with the falling snow and sleet. These grapes were positively uninjured.—

They could not have been detected as hurt in flavor, or otherwise, among those gathered a fortnight previous. They can be raised, and at much profit, too, and they are not half so uncertain as a crop of pears or plums. Will unbelievers call and see? My method of protecting the vine in winter is this:—I pinch all the growing shoots off the vines, as early as September 5th, and thus get well ripened, hardy wood. Then, in November, say 20th, (not too early,) the canes are pruned exactly as they are to grow the next year, and every shoot that looks light colored and badly ripened, is cut back to good, sound wood. After pruning, all the canes are gathered together, and loosely tied, or "stopped," with woolen list. Then a good lot of leaves, or old straw litter, is spread along on the ground where the canes are to lie, with a few sticks of wood to keep them out of the ice, comparatively dry; the canes are then bent and covered slightly, two inches, with the same leaves or litter; then heave over the whole some old matting, straw, or a thin covering of green boughs, and you are all right for winter. Do not meddle with any of this rigging till April 10th, certain, and remove it, after that time, at the commencement of a rain storm, or in cloudy weather. Let the vine still recline on the ground, and do not put it up on the trellis until the buds push, say May 10th; you will find out, that year, whether or no this advice has been of any service to you.

A. J., JR.

WISCONSSET, Sept., 1852.

—*Maine Farmer.*

#### NEW METHOD OF SUPPORTING VINES IN VINEYARD CULTURE.

A PAMPHLET of 88 pages, by the venerable botanist, André Michaux, who presents it to the Cincinnati Horticultural Society, with a fac-simile of the gold medal awarded to him by the French government for the improvements he has introduced.

This consists of training on a wire trellis, instead of allowing the vines to sprawl upon the ground, as is frequently practiced. Mr. Michaux finds that the grapes ripen earlier and better when trained up in this manner. From his *Memoire* it appears that some seventy-five of the eighty-six departments of the empire, are devoted to the culture of the vine, to a greater or less extent, according to their climate.—Ed.



## Transactions.

### THE CINCINNATI HORTICULTURAL SOCIETY,

Has kept up the winter meetings with spirit. They have, however, been devoted chiefly to business affairs. The financial condition of the society has required consideration, and the Annual Schedule of Premiums for next year has occupied much care in its completion. Among the awards, it is gratifying to find a large number of this work. How superior in usefulness and pleasure is this class of premiums to the paltry cash! A book is always at hand for useful reading or reference; whereas the money is generally soon spent, and the honor of the victory evanisheth and is soon forgotten. Many of our kindred societies have found it greatly to their advantage, and entirely to the satisfaction of their members, to pursue a similar course.

Early in December a delegate from this society went up to take a seat in the Annual Convention of Agriculturists, at Columbus, but found that the law had not yet been changed so as to include Horticultural societies. He reported accordingly, on his return, and, as some change in the law has long been desired by this and kindred associations, so that Horticultural as well as Agricultural societies may be embraced within its provisions, the report of the returning delegate, as read on the 11th ult., was referred to a select committee to prepare an appropriate memorial to the State Board of Agriculture, urging them to continue their efforts to effect the desired change in the law.

The weekly meetings of the society have been enlivened by interesting displays of fruits. Some of these were from Michigan; and one, from Parker Merrill of South Hampton, Vt., presented as the Beefsteak apple, attracted the attention of members by its pretty form and color, as well as by its reported prolific and unfailing character. It has been somewhat admired in the eastern states, but lacks high flavor.

At a recent meeting the committee on the Downing monument reported concurrence in the following circular from the Central

Committee; they were thereupon discharged, and some liberal subscriptions were made at once by gentlemen present.

#### *American Pomological Society's Circular.*

The undersigned were appointed a committee by the American Pomological Society, at its late meeting in Philadelphia (with power to add to their number,) to solicit from individuals subscriptions, each of *one dollar or upward*, to procure such testimonial as the committee may deem suitable and expedient, in memory of the lamented Andrew Jackson Downing.

His private virtues, his great worth and important services in Horticulture, Rural Architecture, and the various branches of terra-culture, and his numerous and valuable publications, justly entitle him to this distinction.

In discharge of the duty imposed upon us, we transmit to you this circular, and earnestly request your prompt co-operation in the fulfillment of this benevolent design.

Associations as well as individuals who may receive this circular, are requested to transmit, by mail or otherwise, their contributions to either of the subscribers, who will register their names, residence, and subscription.

MARSHALL P. WILDER, Boston.

ROBERT BUIST, } Philadelphia.

CALEB COPE, }

H. W. S. CLEVELAND, Burlington, N. J.

BENJAMIN HODGE, Buffalo, N. Y.

F. R. ELLIOTT, Cleveland, Ohio.

LAWRENCE YOUNG, Springdale, near Louisville, Ky.

W. H. BRECKENRIDGE, Washington, D. C.

JOHN A. KENNICOTT, Northfield, Illinois.

The several Vice-Presidents of the American Pomological Society, and the chairmen of the various State Fruit Committees, are hereby constituted members of the above committee, with authority to appoint associates in their respective states and territories.

MARSHALL P. WILDER, *Chairman.*

**The American Wine Growers' Association.**

THE meetings of this agreeable association have been held by adjournment, on account of the number of specimens that came under their observation at the November meeting. Some of these not being reached in course, were returned to Mr. Longworth to keep for another occasion. They consisted of a number of samples, made by him from small quantities of his several new grapes, and are possessed of great interest.

The discussions have been chiefly directed to the circulation of the sap in vines, and the different modes of summer pruning, depending upon the effects they produce upon the maturing of the crop.

This subject is not exhausted, and the members are expected to present their views in writing at the January meeting, 29th instant, at the house of the president, L. Rehfuß.

**The Ohio State Board of Agriculture.**

THE annual convention of delegates from the county societies was called to order on the 8th of December by the officers of the Board, who presided, made their annual financial statement, and the corresponding secretary read his report.

The call of counties was responded to by sixty-eight delegates, who handed in their credentials and some reports. One delegate presented himself from a horticultural society, under an impression that the law had been so changed as to include this interesting branch of agriculture; but when it was stated from the stand that the law had not yet been altered, he of course withdrew, submitting to the vexation with as good a grace as could be expected. It may not be known to all, that application had been made by horticultural societies to the board, and favorably received by them, to have the law revised in their favor. Seventeen persons having been nominated, the balloting commenced, and resulted in the election of the following persons to fill the vacancies occurring by limitation, and to serve for two years:

J. G. Gest, of Green county; R. W. Steele, of Montgomery; W. H. Ladd, of Jefferson; David McIntosh, of Portage; and James T. Worthington, of Ross, were elected.

The following members hold over till next year: R. W. Musgrave, of Richland county; S. Medary, of Franklin; M. L. Sullivant, of Franklin; William Case, of Cuyahoga; Philo Adams, of Erie.

Professor Mather called the attention of the convention to that portion of his report which relates to holding an Industrial Fair on the waters of the West. Prof. M. offered for adoption the following resolution:

*Resolved*, That the State Board of Ohio be requested to correspond with the State Agricultural Boards and Societies of other states, relative to holding an Industrial Exhibition at such place as may be selected; also requesting them to send delegates to Columbus to take this subject into consideration. [At what time?]

Adopted.

Mr. Waddle offered a resolution requesting the State Board of Agriculture to authorize a geological and agricultural survey of the state of Ohio. Adopted.

Several other resolutions were offered and adopted.

W. S. Wright, of Licking county, very courteously moved that horticultural societies throughout the state be entitled to delegates in the state conventions, the same as agricultural societies.

This was not agreed to, on two accounts; first, that the convention could not, by its vote, change the law upon which the whole organization was based; in the second, place, to many members this was a new question, upon which their thoughts had not been directed; and in the brief discussion, two talented men took the negative, and urged it vehemently, while no one felt prepared to advocate the justice of the idea of the resolution, which might have been modified by making it a recommendation to obtain a change in the law. Nor is this remarkable, when it is considered that several motions on various subjects were offered and failed, as it appeared to some, through a spirit of mere opposition, entertained by some members who delighted in being very prominent before the convention. Among the resolutions were some suggesting to the Board the propriety of endeavoring to equalize the premiums in the schedule so as to meet the views of some interests that have felt themselves overlooked and slighted. The Board appeared to think that this con-

vention "for consultation" with them, could not know the interests of the people from whom they had come, and should not trammel them with such resolutions. The meeting then adjourned, after one day's session, and just as they were ready to commence interesting and instructive discussions upon practical subjects, which could not fail to have proved of great value to each other, and would, no doubt, have furnished matter well worthy of being reported, in a condensed form, as an addendum to the *Annual Report*.

The new Board met on Thursday morning, the 9th inst., and elected S. Medary, President; Joseph G. Gest, Recording Secretary; and Michael L. Sullivan, Treasurer.

*Executive Committee.*—S. Medary, Joseph G. Gest, and R. W. Steele.

The Board, after transacting a large amount of necessary business, adjourned to meet again on Tuesday, the 11th of January next.

It was decided to hold the next State Fair at Dayton, Montgomery county, on September 19th, to 22d, 1853.

#### Georgia and Alabama Agricultural.

THE Soil of the South says—"We were exceedingly gratified at the beautiful display of fruits, vegetables and flowers, at the late fair of this society. We have attended the most prominent fairs of the Union, and we have never seen a finer display of fruits. The collection shown by Mrs. Carey, of Chunnuggee, Alabama, would have done credit to the hot-house culture of Old or New England; embracing a great variety of apples, pomegranates, figs, grapes, and each of the finest form, largest size, and smooth as marble. Among the collection of apples exhibited by Mr. Taunton, of Macon county, Alabama, was one which we think equal to any we ever saw, not only in point of size and color, but for its aromatic flavor. The pomegranates exhibited by Mr. E. S. Greenwood, were of surpassing beauty, and of exquisite flavor. Rev. Richard Johnson, of Falbotton, (who contributed much to the interest of the fair in several other departments,) exhibited five varieties of ripe figs; also the fruit of the Osage orange. Mr. A. J. Brown, of Russell county, Ala., exhibited a superior specimen of apple, called the

Black Coal. General Bethune, of Muscogee, had some on exhibition, which, for flavor, were equal to any exhibited. This part of the exhibition alone has fully established the fact that we may be independent of the world for our fruits.

The vegetables are represented as being very fine. "Every vegetable exhibited was the very finest of its class." This is high praise, indeed. The reporter adds, "The exhibition was a credit to the exhibitors and to the country. We shall find after this, that if we import our onions, cabbages, Irish potatoes, beets, etc., from abroad, it is our own fault."

#### Massachusetts Horticultural Society.

THE crowds which visit the Horticultural Society's Exhibition, in the Public Garden, attest the statement we have already made, that it is the grandest and most varied display of the fruits of the earth ever presented to an American public.

The following prizes have been awarded by the fruit committee:

*Pears.*—Largest and best collection of Pears—M. P. Wilder, Appleton medal, \$30; Hovey & Co., \$30.

Gratuities; a gratuity of \$7 to A. D. Williams, Josiah Richardson, John Gordon, Samuel Walker, Messrs. Winship, A. A. Andrews, J. S. Cabot, Josiah Lovett, R. Manning, Otis Johnson; a gratuity of \$5 to J. S. Sleeper, Azell Bowditch, Henry Vandine, W. B. Kingsbury, William Bacon, W. P. Jenney, Jonathan French.

For the best twelve varieties of Pears—1st, W. R. Austin, \$20; 2d, Josiah Stickney, \$15; 3d, Samuel Downer, \$12; 4th, Messrs. Hovey & Co., \$8.

For the best dish of Pears, twelve specimens of one variety—1st, Samuel Downer, Jr., for Louise Bonne de Jersey, \$6; 2d, Josiah Richardson, for Flemish Beauty, \$5; 3d, George B. Ardwell, for Doyenne Blanc, \$4; 4th, Ezra Cleaves, for Marie Louise, \$3.

*Apples.*—For the largest and best collection of apples—1st, to B. V. French, Appleton medal, \$40; 2d A. D. Williams, \$20.

For the best twelve varieties, twelve specimens each—1st, Josiah Lovett, \$20; 2d, James Eustis, \$15; 3d, John Gordon, \$12; 4th, T. B. Moore, \$8.

For the best dish of Apples, twelve specimens of one variety—1st, Messrs. Hovey & Co., for Porter, \$6; 2d, Josiah Stickney, for Melon, \$5; 3d, M. H. Simpson, Porter, \$4; 4th, Levi Brigham, Nonpareil, \$3.

Gratuity of the Society's Bronze Medals; to Bowen Harrington, Cheever Newhall, Fearing Burr, and E. Tufts.

*Assorted Fruit*.—1st, For the best basket of fruit; to Otis Johnson, \$10; 2d, to J. F. Allen, \$7.

Gratuity; to W. C. Strong, \$7; Azell Bowditch, \$7; Joseph Breck, \$3.

*Peaches*.—For the best dish of not less than twelve specimens—1st, to C. L. Tarbell, \$5; 2d, to J. A. Kenrick, \$3.

*Plums*.—Gratuity; to George Watson, \$3; to Henry Vandine, \$3.

*Grapes*.—For the best five varieties—1st, Mrs. Durfee, \$12; 2d, W. C. Strong, \$8; 3d, James F. Allen, \$5.

For the best two varieties—1st, Joseph Breck, \$6; 2d, H. Hazeltine, \$4; 3d, Charles Sampson, \$2.

[Notices of some other very interesting meetings are unavoidably excluded by the crowded state of the pages.]

## Editorial.

### VARIOUS ITEMS.

#### Frontispiece.

THE illustration for the month is a view of the residence of Joseph Malcomson, Esq., a wealthy manufacturer, whose cotton mills (giving employment to about twelve hundred individuals,) are situate at Mayfield, in the valley of the Suir, Ireland. It is another specimen furnished from the portfolio of Tinsley & Son, Architects, now practicing in this city, and who have just completed a very handsome design for a University at Indianapolis. The connection of the conservatory with the house, whence it may be entered and its beauties enjoyed, evidences an appreciation of those delights which the study of floriculture places within our reach, even at the season of the year when, in our climate, the beauties of the parterre disappear, and the value of such a source of enjoyment is necessarily enhanced by the total disappearance of vegetation before the intense cold of our winters. No house pretending to be the abode of the wealthy, the educated and the refined, should be without such an appendage.

#### Important Meetings.

THE State Board of Agriculture of Ohio will meet at Columbus on the 11th of January, to arrange the Schedule of Premiums, and for other purposes.

At the December meeting it was determined to hold the State Fair in Dayton, Montgomery county, on the third week, 19th to 22d days of September, 1853.

Professor MATHER proposed, at the recent Convention of Farmers, at Columbus, that correspondence be opened with other states, respecting a great Agricultural Meeting on the western waters; a primary meeting for consultation, to be held at Columbus, O. No time was mentioned, however. Now a query arises whether we are not doing as much as can profitably be done, with the state and county meetings, and visiting our neighbors, trying always to avoid interfering as to time? When the State Fairs have been held longer, we may combine our attractions to make a grand raree-show, occasionally, and no doubt for mutual benefit and advantage. What say you, Professor?

The State Pomological Society will meet at Columbus, on the 11th of January, and expect to see a full meeting, well supported by abundant fruits for discussion.

The annual meeting of the State Board of Indiana and Delegates, will be held on January 6th, when vacancies will be filled, and other important business will be transacted, and at the same time a fine exhibition of fruits, roots and grains, has been solicited, and, as appears from the Indiana Farmer and other papers, is expected. Why has not Indiana a Pomological society? She surely has the material in her fruit-growers, and the pabulum in their beautiful products.

The annual meeting and election of the *American Wine Growers' Association* will be held on the last Saturday, 29th of January, when the discussion will be upon the circulation of the sap in vines.

The New York State Agricultural Society will hold its annual meeting on the second Wednesday, February 9th.

The National Agricultural Society will meet in Washington City, February 2d.

A corrected list of all important meetings will be found in the Advertiser, for reference, by readers who may be interested. Thanks for all who may aid in correcting its mistakes, if any be observed.

#### To Correspondents.

To many kind gentlemen and ladies among the subscribers and readers of the Review, I am indebted for aid in this enterprise. All who favor me with communications, should endeavor to forward their letters as early as possible in the month; otherwise delay must result, as the *make-up* is sent to the printer with the opening of each kalend, and it often happens, as now, that several must lie over.

Thanks are due to many kind friends for their words of encouragement and praise, which well nigh make a man vain; against

which I hope to be withheld; yet do not court rude condemnation from those who do not happen to agree in judgment with those to whom allusion is here made.

#### The Public Grounds at Washington.

MR. WILLIAM D. BRECKENRIDGE has been appointed the successor of the lamented Downing, to continue the improvement and embellishment of the public grounds in Washington, conducted during the past two or three years by the latter gentleman.

This is believed to be an excellent appointment, as Mr. B. appeared to have appreciated the genius of Mr. Downing, with whom he had labored in the execution of his plans upon these very grounds.

#### CORRESPONDENCE.

##### Annual Meeting at Albany.

AGRICULTURAL ROOMS, ALBANY, }  
December 17, 1852. }

FRIEND WARDER:—Please say in your next, that the annual meeting of the New York State Agricultural Society will be on the second Wednesday (9th) of February, 1853, instead of the 6th of January, as you have it in your December number.

Yours, truly, B. P. JOHNSON.

#### Tan-Bark.

DR. WARDER:—Can you inform me where I can procure a few grains of the Stowell corn? [Yes, see next page.]

I see in the November number of your valuable Review, an article from "Veritas," adverse to the use of "Old Tan" upon strawberry beds. Veritas gives his experience. Permit me to give you mine. Three years since I put out my plants, twelve by eighteen inches, and covered the intermediate spaces to the depth of two or three inches, with old tan-bark. They have borne finely since, and have required no work, except pulling off the runners, for the rea-

son that neither grass nor weeds penetrate the tan. The runners readily strike root through this substance. Respectfully, yours,

BEN. W. JOHNSTON.

MEMPHIS, Tenn., Nov. 22, 1852.

**Stowell Corn Seed.**

*Dear Sir:*—In your last number of the Review, you were pleased to notice our patch of Stowell's Evergreen Sweet Corn. We have had it for green corn since almost the middle of August until the present time, as fine as any one could wish. We have also prepared a few bushels for seed, and will forward it in small packages, containing at least one pint, to persons who will inclose us one dollar, and shall forward it as they shall direct.

HUBBARD & DAVIS.

DETROIT, November 19, 1852.

This is inserted in reply to many inquiries made for seed. Perhaps some of our seedsmen will secure a supply for the coming season, and be able to disseminate this new variety, which has certainly attracted much attention in the East, where it is highly recommended.—Ed.

**Critique on Nos. 4 and 5, Vol. 2.**

DR. WARDER:—A few moments of leisure suggest a communication for your Review; but on what subject? Running mentally over the contents of the last two numbers I have read, your leader on Horticultural Gardens occurs to my mind. The question with which you commence has often occurred to me. The answer seems to be—want of interest in our horticultural societies. Your flourishing society, I should think, could now commence a garden without being liable to the objection which caused it to be abandoned on a former occasion. No class of men are so much interested in such an undertaking as practical gardeners. Everything which tends to cultivate public taste for this beautiful art, aids

their business; and even if for a time it should compete with them, the benefit is substantially theirs. The fruit or flower purchased by a young amateur, so wins upon his affection as to create a desire to possess more; and the pleasure they afford ever afterward constrains him to be a patron of the floriculturist.

I heartily wish success to the contemplated experiment at Columbus. If it succeed, others will spring up, until a garden will become indispensable to every horticultural society in the country deserving the name.

*California Vegetables.*—" 'Tis distance lends enchantment to the view"—and size to the vegetable, no doubt, also. The wonderful accounts of vegetable monstrosities grown in California, is noticed, we observe, in all the papers. We have seen their gold, (and "seeing is believing,") but this about beets, potatoes, tomatoes, onions, etc., and their monstrous productiveness, "must grant us pause." I fail in my best efforts to believe the account of J. N. Horner's potato crop, worth, at quoted prices, over a million and a half of the "dust." I do not despair, however—credulity may be cultivated.

*Hedges.*—A neighbor of mine tried, last year, a plan somewhat similar to that recommended by J. McFadden, differing only in covering with earth the portion of the plant pegged down. It was a two years' old hedge, that through neglect had grown up quite irregular; and this plan was adopted to reduce it to somewhat the appearance of regularity. If it succeed in this case, it will be a fact worth knowing, as from being choked with weeds, many had died, and altogether it presented a very unpromising appearance when I saw it, before the operation. Should it turn out a hedge, I shall report to you. But few farmers will "trench the ground eighteen to twenty-four inches deep and three feet wide; and I am inclined

to think their subsequent labor would be increased by so doing, causing a rampant growth in a tree which we with "mature aforethought" determine shall be a scrubby hedge. I apprehend that the rapid growth of the *Maclura* when established on good ground, will be a serious objection to it as a hedge plant. [Not under sufficient pruning.]

*Landscape Gardening.*—I have been much interested in an article on Landscape Gardening, by Thomas Meehan, in *Downing's Horticulturist*. Such articles are now much needed to direct and cultivate the growing taste for this art; and it will depend upon the direction given to this growth by yourself and others whether the "retired citizen," who has for some years been so well cautioned against straight lines in planting as almost to disregard them in setting out his orchard, will not, in following the "natural method," make a shapeless wilderness round his home. Such articles as those of Mr. M. serve to correct both extremes. The direction to employ a landscape gardener, will do where one can be found; but, for *one* Hiram Powers, there are thousands of tasteless stone-cutters; and in the art of landscape gardening the same is true; at least nine out of ten who profess it, know no more of its true principles than the mechanical stone-cutter who may work out the models of a Powers in marble, does of artistic sculpture. Any one who is capable of enjoying the beautiful in nature, can direct the planting of trees so as to produce a pleasing effect; and should the novice be obliged to remove or cut down some portions of his work before the desired effect is produced, yet it is but a lesson in an art which must in some measure be acquired before it can be enjoyed, when seen, even though it be the work of a master. As a landscape painter will sometimes combine in his pic-

ture, possibly, some disjointed features in nature, seen at long intervals or distant points, to make one harmonious and beautiful whole, so should he who aspires to the art of landscape gardening, endeavor to combine as many beauties which he may have seen in nature, in such a way that "each gives to each a double charm." The rules of taste are the only rules to which it will submit; and the retired citizen is quite as likely to possess a correct taste as the man who has set out his thousands of trees under the direction of another.

I once saw a beautiful effect, produced naturally, in a field belonging to a person who had probably never heard of such an art as landscape gardening. There were several large sink-holes, (so common in limestone countries,) which of course prevented cultivation for several feet round their margins. These margins and the funnel-shaped sides had been given back to nature, who clothed them with a beautiful growth of elm, tulip, poplar, mulberry, and wild-cherry. The perfect drainage of such a position, left nothing to be desired as to luxuriance; and the combined effect of several such groups in the large, open field, could not be excelled by the most complete artist. It was a perfect study, from the hand of nature.

I am pleased to see the remarks of the President of the Wine Growers' Association on the so-called analysis of soils, which we frequently see published, an average sample of which he gives. Such analyses are scarcely worth the time it takes to read them, even if they did not bear upon their face evidence that they are not correct, as far as they go; for he who could ascertain that 100 parts of a soil contained 2.74 of carbonate of lime, would be able to give some other more important components of the 81.16 earthy residuum, if he arrived at that result by accurate experiment. No one

capable of making such an analysis correctly but knows that the alkaline salts and phosphates are far more important constituents.

P.

REMARKS.—Why has P. been so modest and diffident as to withhold his communication till now? Had this paper been received last spring, an effort would have been made to secure his pen in the service of the readers of these pages; for he writes *con amore*, and hence agreeably. Will he not now continue?—ED.

### NOTICES.

#### The Western Agriculturist.

WHEN at Columbus during the session of the Annual Agricultural Convention, a copy of this monthly, with a stirring prospectus for the coming year, was found upon every table for the inspection of members.

Not having seen the work for some time, I had supposed it was defunct; and, that it "had died of atrophy or from want of good agricultural food," had been the coroner's verdict; for the last number seen was made up of second and third-hand articles, such as might have been selected for the general readers of a daily paper.

Messrs. Medary and Foster promise a standard agricultural paper, with original matter and correspondence, disclaiming "all intention to lay down [print] only theories for the guidance of our farmers." They call upon them loudly, to step forward and subscribe, and also to send their communications. This is all very well and proper; but when they say "it will be devoted to *corn and cattle*, to plowed fields and horses, rather than to flower-pots and daffy-down-dilly cultivating," some of us will think that they are taking a narrow view, indeed, of the great field of agricultural literature, and overlooking the pomological and horticultural interests, which really compose a very impor-

tant and integral part of the agriculture of our country, while they add considerably to the wealth, and infinitely to the pleasure, health, and happiness of all who will but appreciate their merits.

#### Kentucky Cultivator.

THIS aspiring little sheet, which is destined to do much for Kentucky, is determined to come nearer town, and is now a neighbor resident in Covington, over the river. Owing to the indisposition of the editor of the Western Horticultural Review, we have not met, but brother Atkinson will please accept a word of welcome till we meet, or come over.

#### Ohio Farmer.

THIS sterling family paper, published at Cleveland, and edited by judicious caterers for the instruction and amusement of its readers, is about entering upon a second year of usefulness. The attention of the reader is directed to the PROSPECTUS, which appears in the Advertiser, where also he will find the terms. Great reduction is made to clubs.

Dr. G. Sprague, formerly the agreeable editor of the Ohio Agriculturist, at Tiffin, is the corresponding editor of the Farmer, and adds greatly to its value.

#### Maryland.

A VERY interesting account of the Agriculture of the Eastern Shore of Maryland, by B. P. JOHNSON, Esq., has been received. That shrewd observer, after attending the State Fair at Baltimore as a delegate from New York, extended his critical observations to the neighboring agricultural region, in which he found much of interest. Well knows he how to find such objects as are worthy, and well has he portrayed them in his letters. They are too long for these columns, but were gratefully received by the



Editor; and many others who have seen them, agree in thinking them well worth the time occupied in their perusal.

#### **The Chemistry of Agriculture.**

The Earth and Atmosphere as related to Vegetable and Animal Life, with new and extensive Analytical Tables, by DAVID CHRISTY. Ward & Taylor, No. 10 East Fourth street. 50 to 75 cents.

THE twelve chapters of the text of this promising little work, are devoted to an examination, or condensed consideration of mineral, animal, and vegetable chemistry, as they are dependent upon one another. Thus the first, containing a few pages, is devoted to the sources of soils; the next two consider, in brief, the groundwork of chemistry, organic and inorganic elements. From the fourth to the ninth chapters, or the body of the work, is appropriated to the review of various proximate elements, those curious organic combinations of the inorganic elements found in organized bodies, and which act in some degree the part of ultimate elements—a very curious and deeply interesting class of bodies, such as starch, sugar, albumen, gluten, and many others.

Chapter ten treats of combustion, digestion, and decay; the next, of the structure of plants, their growth, influence of treatment, etc., etc.

The last chapter takes up the consideration of the animal kingdom and its relations to the vegetable, digestion, respiration, nutrition, animal heat, etc. In the conclusion he modestly asserts that it has not been his intention to produce a book that shall supersede the many valuable agricultural works before the public, nor to supply a substitute for the instructive periodicals now devoted to the interests of agriculture, but to present a concise view of the great principles of the science.

He urges analyses of the soils and sub-

stances, which is all very well where it can be properly done. His tables appear to be well selected, and furnish much interesting matter. In his whole work, which is indeed but a small compendium of the extended subject of chemistry, Liebig's views are apparent.

#### **Evergreen Nursery.**

A NEAT catalogue from this establishment has been received, from the hand of the amiable and enterprising proprietor, DAVID J. GRISCOM, of Woodbury, New Jersey. It contains a priced list of foreign and native evergreen and deciduous trees and shrubs, for ornamental planting.

Friend Griscom imports and cultivates this class of plants largely in a soil which is said to be admirably adapted to making healthy growth and good roots, which may be removed safely.

The reader is referred to his terms, which may be found in the advertising pages accompanying this work.

He addresses himself to gentlemen improving private country residences, and to nurserymen wishing to increase their stock of this character. To the latter he offers twenty per cent. discount.

#### **Evergreen Hamlet.**

SOME months since a gentleman of Pittsburg kindly forwarded a neat pamphlet, setting forth the advantages of a proposed plan of economical country residences.

Those interested will please overlook the delay, as the subject was only laid over for leisure to prepare a notice, and then became overlaid and escaped the Editor's observation. He may also add that he confidently hoped to have been able to visit Evergreen Hamlet, and see with his own eyes.

The communication from W. H. was received too late for this number, but shall appear in the next.

## Meteorology.

### Temperature of July.

DR. WARDER:—Permit me to call your attention to an error in the October number of your Review, 5th page, 2d column—for “mean of July, 63°.40,” read 53°.40.—42°.73 being the mean minimum, and 64°.07 the mean maximum.

The very interesting table you have published of the temperature of Chiswick, near London, discloses the remarkable fact, that the months of May, June, August and September are warmer than July, from observations at that place for the last twenty-six years.

Thus the mean temperature of May is 54.07  
 “ “ of June, 60.61  
 “ “ of July, 53.40  
 “ “ of Aug., 62.12  
 “ “ of Sept., 57.15

Consequently August is the hottest month, and the mean of the three hottest months is 59°.96, and not 62°.04 as recorded. I think some error must have crept in to produce this result—probably in the mean min., as put down at 42°.73. July is *our* hottest month, (77°.32,) and I am not aware of any cause operating to make it otherwise at Chiswick.

JOHN LEA.

### Meteorological Observations at St. Louis.

THE following meteorological observations for the year, with the accompanying remarks, have been kindly furnished by Dr. Engelmann, of St. Louis, a gentleman who has for a number of years paid great attention to this and kindred subjects, and whose well known character for general scientific attainments is a sufficient guaranty for their accuracy.—*St. Louis Med. and Surg. Jour.*

ENGELMANN'S TABLES.

TABLE I.									
1851.									
	Baromet.	Mean	Lowest	Highest	Range	Greatest change in twenty-four hours.	Prevailing winds.	Mean clearness of the sky	Number of days
Month									
January	29.610	36.2	1.0	63.5	62.5	F. 40.0	W. then S.E.	6.1	15
February	29.653	38.8	14.0	69.5	55.5	F. 40.5	W. then S.E.	4.5	11
March	29.593	48.3	23.0	78.0	55.0	R. 29.5	W. then S.	6.3	16
April	29.514	52.8	34.0	76.0	42.0	R. 37.0	W. then N.W.	6.2	17
May	29.447	69.0	29.0	82.0	63.0	R. 33.0	S.E. then S.	5.4	12
June	29.426	72.9	54.5	92.0	37.5	R. 24.0	S.E. and W.	4.4	10
July	29.420	78.0	61.0	97.0	43.0	R. 25.0	SW. then W.	6.1	19
August	29.478	75.6	61.0	94.0	33.0	F. 25.5	SE. then E.	4.9	10
September	29.575	72.5	37.0	94.0	57.0	F. 31.5	SE. then S.	7.5	22
October	29.406	56.1	26.5	81.5	55.0	R. 29.0	W. then S.E.	6.2	20
November	29.501	41.1	23.0	64.5	39.5	R. 29.0	W. then N.W.	3.8	10
December	29.637	30.5	-2.5	64.0	66.5	F. 37.5	W. then S.E.	4.5	11
Whole year	29.522	56.0	-2.5	97.0	99.5	F. 40.5	W. then S.E.	5.5	173
									146
									46
									33
									42.84
									1.53

METEOROLOGICAL TABLES FOR St. Louis, DURING THE YEAR 1851.

TABLE II.

STATE OF THE WEATHER.

### REMARKS.

This table is the result of 5,000 to 6,000 observations, made in St. Louis, at the cor

ner of Fifth and Elm streets. Both are wide streets. The instruments are placed 105 feet above low water mark, the thermometer (one of Green's Smithsonian instruments) at a northern exposure, twenty feet above the street, six inches from the wall of the house. The times of observation are sunrise, 9 A. M., noon, 3 P. M., and 10 P. M.

The first column gives the mean atmospheric pressure, or mean elevation of the barometer of every month, reduced, for the sake of uniformity, to the temperature of the freezing point. It will be observed that the barometer is above the mean elevation of the whole year, from January to March, in September and December; in the other months it stands below the mean: it is highest in February, and lowest in July. This corresponds very well with the mean observations of twelve years, which show the barometer above the mean from January to March, below the mean from April to August, (lowest in June,) and again above the mean from September to December.—No tabular statement has been given of the highest and lowest barometrical observations and of the range. I will here only state that the lowest occurred on April 4th, 28"850, and the highest on January 31st, 30"305. The range 1.455, near one inch and one-half, is more than the usual range in St. Louis during one year, though the greatest range in twelve years amounts to one and three-fourths of one inch.

Examining a table of barometrical extremes, it is further seen that they are greatest from January to March, and in November and December, but that the barometer is a great deal more stationary in the summer months, and especially from June to August; we then do not have those violent atmospherical commotions which are not unfrequent even in those months, on the eastern coast and in the greater part of Europe. The mean range of the barometer from November to March is over one inch, and from April to October under one inch; from June to August nearly half an inch.

The second to the seventh column relate to observations of the temperature and its changes. The second column gives the mean temperature of every month. It will be seen that December was by far the coldest month of the year, and as usual July the

warmest. January, February and March were warmer than usual, April much cooler, May and September warmer, June, July and August equaled the average temperature of those months, so did October and November, and December was colder. The mean temperature of the year very slightly exceeded the mean of sixteen years. The years 1835, 1838 and 1843 were considerably colder, and 1833, 1842, 1844, 1845 and 1846 much warmer, the others were average years.

The third column gives the minimum temperature of every month. The fourth the maximums, and the fifth the difference between them, or the range. It will be seen that neither the greatest minima nor the greatest maxima have been reached in this year, and the range was not quite one hundred degrees; most in January, May and December, and least in April, and, as usual, in June, July and August. The lowest temperature observed in St. Louis in 20 years were —25°0 in February, 1835; —18° in January, 1834 (both observed in the country some miles from the city;) —12°0 in January, 1852; —11°0 in January, 1841; —8°5 in February, 1836; —5°8 in January, 1840; —5°0 in February, 1838. In December, the temperature had never been so low as in this year; in December, 1845, when the river was frozen over from the 6th to the end of the month, it reached only —1°.

The highest temperatures observed in St. Louis were in 1833, 1834, 1838, 1841, and 1850, when the thermometer rose to over 100°. It did not rise over 95° in 1840, 1842, (from June to August, but in that year it rose to 98°0 in September!) 1847, 1848, and 1849. In all the other years from 1833 till 1851, the highest temperature rose from 97°0 to 99°5.

The range or the difference between the maximum and minimum temperature of the year is in this year 99°5; in other years (1832, 1833, 1835, 1836, 1838, 1841) it was from 6° to 26° more, but frequently it is less; so 1837 and 1847, when it amounted only to 91° and 94°. In this respect also the year 1851 proves to be an average year.

The sixth column is not usually found in meteorological tables, but I considered it important, especially in a medical point of view, as it is not so much the great range

of the temperature which affects the animal system as rather the suddenness of the changes. This column, then, gives the greatest change in every month which occurred in twenty-four hours. The letters F. indicate that it was fall of temperature, and R. that it was a rise, which changes effect the system very differently. It will be observed that the greatest changes were always falls of temperature which took place from the noon or afternoon of one day till the morning of the next; the rises occurred always from the morning to the afternoon of the same day. The greatest changes did not reach over  $40^{\circ}5$  in the winter months, and  $25^{\circ}5$  in the summer months. Is our climate really as changeable as often stated? The year 1851 appears to prove the contrary. In other years, however, some much severer changes have occurred, and the last took place from the 16th to the 17th of March of this year, 1852, when the temperature fell  $51^{\circ}$  in seventeen hours. Greater changes even than that have taken place, in January, 1847,  $56^{\circ}0$ ; in March, 1839,  $54^{\circ}0$ ; and in March, 1833,  $52^{\circ}0$ . On an average the greatest and most sudden changes occurred in March, next in April, then in January, February, and October; the least in July, then in August, June, September, May, and November. The greatest change that I ever observed in July was only  $32^{\circ}0$  in 1846.

The last column in this table gives the dates on which these changes occurred, *e.g.* in January the temperature fell  $40^{\circ}$  from the 28th to the 29th, etc.

It is proper to state here that these thermometrical observations have all been made in the heart of the city, though, as stated, in a fairly exposed situation. Comparative observations have proved that in the country the temperatures are very different. To be sure, in cloudy, or rainy, or in stormy weather, the temperatures are pretty much equal all over town and country; but in clear, still days it is, at sunrise, generally very much cooler in the country, and especially in valleys where moisture, evaporation and radiation are considerable; early in the afternoon, between two and three o'clock, it is on such days very often warmer in the country. Well compared and carefully observed thermometers have given me a difference at sunrise, sometimes of as much as

$10^{\circ}$  or  $12^{\circ}$ , and in the afternoon occasionally  $2^{\circ}$  to  $5^{\circ}$ , so that the daily range of the thermometer in the country is sometimes larger than in the city by  $12^{\circ}$  to  $15^{\circ}$ ! Rarely the sunrise temperature is lower in the city than in the country by  $1^{\circ}$  or  $2^{\circ}$ .

The first column of the second table refers to the interesting phenomena of the winds. It will be seen that west-winds have been prevailing from January to April, and from October to December; southeast and southwest winds are predominant from May to September. If we compare the eight principal winds, we find in the six months from November to April the winds prevailing in the following order and proportion:

W. 54; SE. 30; NW. 26; S. 23; SW. 16; NE. 13; N. 10; E. 9 days.

In the six months from May to October the winds follow so:

SE. 45; W. 28; S. 27; SW. 26; E. 20; NW. 16; NE. 14; N. 8.

West and southeast winds are therefore the prevailing winds for the whole year round, and west more than southeast; the former more in the winter and spring, the latter in the summer and fall.

If we compare only the four cardinal directions—west, north, east, and south winds, (when the southwest wind, for example, counts with the southerly and westerly winds, we obtain the following approximate proportions for the whole year:

Westerly winds, 10; southerly winds, 10; easterly winds, 8; northerly winds, 5.

And for the six winter months:

Westerly winds, 6; southerly winds, 4; easterly winds, 3; northerly winds, 3.

For the six summer months:

Southerly winds, 6; easterly winds, 5; westerly winds, 4; northerly winds, 2.

Almost all the storms observed came from the west; the severer and longer continued ones occurred only in the winter months.—In summer some storms and squalls also took place from southwest and southeast.

The second column records the mean clearness of the sky according to the method adopted by Professor Espy. A completely overclouded sky is designated by 0, a perfect clear one by 10, and the intermediate numbers express the greater or lesser clearness. The mean of five daily observations during each month is here given. It appears from this table that September, March,

April, October, July and January, were the clearest months, and that in November, June, December, February, August and May, the sky was most cloudy.

Similar results are obtained by the three following columns. The third gives the number of fair days, altogether 173; most in September, October, July, April and March; least in November, August and June. The fourth column shows that variable days (where the sun shone part of the day only, whether with or without rains) were noted mostly in August, May and June; the whole number amounted to 146. The fifth column gives the days when the sun did not appear at all, which numbered only 46 in the whole year, nearly one-half of them in February and November.

These three columns show that among the 365 days of the year, only the seventh or eighth days is entirely without sunshine, nearly one-half are clear or fair days, and the balance variable. The average number of fair days in sixteen years was 132, the maximum 170 (in 1838) and the minimum 113 (1836.) The year 1851, therefore, had more fair weather than is usual, even with our fair western climate.

The following column gives the number of days on which it rained or snowed, 83 in all, most in June, (as usual) February, August and November. The average number of raining days in sixteen years was 89, varying from 115 (1836) and 106 (1844,) to 81 (1847) and 78 (1838)—June, May and April, were always those in which most rainy days occurred.

The quantity of rain and snow, which fell during the year, is exhibited in the seventh column. It amounts to nearly 43 inches, of which the most fell in August, February and June. The average quantity of the whole year, for twelve years, was 42 inches; as much as 65 inches fell in 1848, 53 in 1847, 32 only in 1842, 34 in 1843.

Most rain on an average falls in June, and also in May; mostly with thunder storms in heavy showers; the driest months are generally February, January and September. The quantity of rain that fell in 1851 was very unequally distributed over the continent of North America, or at least the Mississippi valley; while toward the north and west of us rains were abundant, and even destructive; toward the south and east of

us for the season almost a complete drought prevailed, considerably injuring the crops. We were here just about on a line where the usual quantity of rain fell, and consequently our crops were superior to those south as well as north.

Only 13 times in this year one inch of rain or more fell in one day, and only three times the rain gage gave more than two inches; May 17th 2.48, August 3d 2.35, and December 29th 2.35 inches. In other years the quantity of rain in twenty-four hours is sometimes much larger. In the last fourteen years, over six inches fell once in 1848, between five and six inches again twice in 1848; between four and five inches once in 1842, in 1847, and in 1850; and between three and four inches eight times. These very heavy rains are mostly accompanied by thunder storms, and occur generally in May and June, but also in August, November and December.

The eighth column states the electricity of the air as manifested by the number of thunder storms in each month; the total number is 53, more than half of which occurred in June and August. The average number in sixteen years was 49; ranging between 63 in 1834 and 1835, 59 in 1845, 35 in 1839, and 33 in 1840. The greatest number always occur in June, next in May, then in July, April, August, and least in December and January.

The different columns exhibiting the fairness or clearness of weather, and the number of thunder storms are added, because it is believed that these different meteorological phenomena have a very important bearing upon human health, perhaps more than barometrical changes, and as much as the variations of the temperature.

—  
An unusual amount of rain has fallen upon this portion of the great Valley of the West. The precise quantity is not at my command, but certainly several inches in the course of a few days, causing terrible floods in all the streams and rivers. This excessive rise is more remarkable because there has been little or no snow in the region drained; nor has the surface of the earth been frozen, with the exception of a limited space on the northern rim of the basin. But the whole earth having been previously saturated with the November supplies, like a wet sponge, the soil refuses to receive any more water, and the surplus must needs run off and make these floods.—Ed.

**Rain.**

The drops of rain vary in their size, perhaps from one-twenty-fifth to one-fourth of an inch in diameter. In parting from the clouds, they precipitate their descent till the increasing resistance opposed by the air becomes equal to their weight, when they continue to fall with a uniform velocity, which is, therefore, in a certain ratio to the diameter of the drops; hence thunder and

other showers, in which the drops are large, pour down faster than a drizzling rain. A drop of the twenty-fifth part of an inch, in falling through the air, would, when it had arrived at its uniform velocity, only acquire a celerity of eleven feet and a half per second; while one of one-fourth of an inch would acquire a velocity of thirty-three feet and a half.

**METEOROLOGICAL TABLE.**

CINCINNATI, NOVEMBER, 1852.

THERMOM.			WEATHER.					Date.	WINDS, ETC.
Date.	Min.	Max.	Sunrise.	Noon.	Sunset.	RAIN	SNOW.		
1	40	54	haze, cl'dy	cloudy..	cloudy ..	....	....	1	Calm; high N. and SW.
2	49	53	rain .....	do.....	do. ....	30	....	2	Light SW. and W.
3	42	55	clear ....	do.....	do. ....	....	....	3	Light SE. and S.
4	54	62	fog, rain ..	rain....	rain, ...	95	....	4	Light S.
5	65	67	cloudy....	do.....	do. ....	1 35	....	5	Light SW. and variable.
6	66	72	do. ....	variable	cloudy..	....	....	6	Light S.; brisk S.; light SW.
7	40	48	clear ....	clear ..	clear ....	....	....	7	Brisk SW. and W.
8	32	49	haze, var..	variable	cloudy..	....	....	8	Calm; light SE.
9	39	45	rain, cl'dy	do.....	clear ....	15	....	9	Light NW. and W.; calm.
10	32	43	variable ..	cloudy..	variable ..	....	....	10	Light NE. and E. [night.
11	41	63	clear ....	clear ....	cloudy..	....	....	11	Light SE.; brisk S.; high S.; squally at
12	35	43	do. ....	do.....	variable..	....	....	12	Brisk W.
13	31	40	fog, clear..	cloudy..	cloudy....	....	10	13	Light NW.; some snow at night.
14	29	38	clear ....	do.....	variable ..	....	....	14	Light NW.; brisk W.
15	27	33	haze, var.	clear ..	clear ....	....	....	15	Light NW.
16	30	36	haze, snow	cloudy..	cloudy....	....	10	16	Calm; light SE.
17	34	39	haze, cl'dy	do.....	do. ....	....	....	17	Light N.
18	33	36	cl'dy, snow	snow....	do. ....	10	....	18	Light N.; calm at eve; snow melted.
19	33	38	fog, cl'dy..	variable	do. ....	....	....	19	Calm; light S. and SW.
20	32	40	fog, clear..	do.....	clear ....	....	....	20	Light W.; NE. and E.
21	31	45	clear ....	clear ....	do. ....	....	....	21	Light SE.
22	38	44	fog, rain ..	rain ....	rain .....	90	....	22	Light SE. and S.
23	39	42	fog, cl'dy..	cloudy..	cloudy....	....	....	23	Light W. and calm.
24	39	44	clear ....	do.....	do. ....	....	....	24	Light NE. and E.
25	47	51	fog, rain ..	var. rain	rain .....	75	....	25	Calm; light S.
26	38	39	do. do. ..	cloudy..	cloudy....	05	....	26	Light W. and NW.
27	31	35	fog, cl'dy..	do.....	do. ....	....	....	27	Light W. and SW.; slight snow.
28	32	46	variable ..	clear ..	clear ....	....	....	28	Light SE. and S.
29	44	53	do. ....	do.....	do. ....	....	....	29	Light S.; calm.
30	35	49	fog, clear ..	do.....	do. ....	....	....	30	Light N.; calm; light NE.
Inches, 4.55 .20							Mean temperature of the month..... 42.67		
Clear days in the month..... 4							do. do. November, 1851,..... 41.90		
Variable—sun visible, ..... 16							do. do. do. 1850,..... 48.22		
Cloudy—sun not visible, ..... 10							do. do. do. 1849,..... 50.83		
Rain and snow water, 4.58 inches.							do. do. do. 1848,..... 39.76		
							do. do. do. 1847,..... 47.60		
							do. do. do. 1846,..... 47.14		
							do. do. do. 1845,..... 44.57		
							Mean temperature of the above 8 months, 45.37		
							Do. do. of the min.,..... 38.60		
							Do. do. of the max.,..... 46.74		
							Lowest temperature,..... 27.00		
							Highest temperature,..... 72.00		
							Range,..... 45.00		

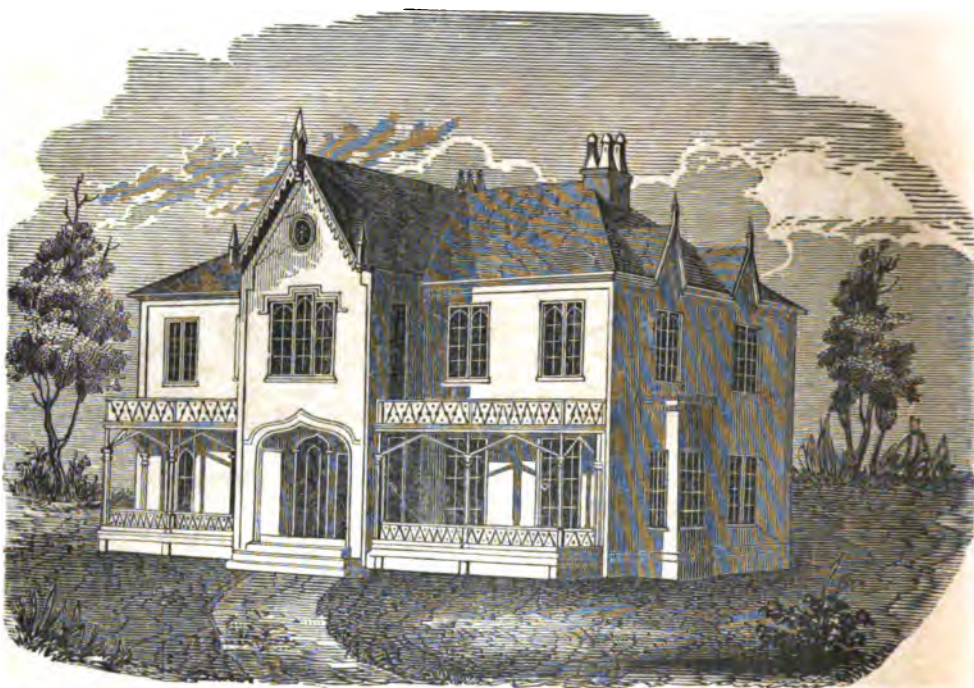
**OBSERVATIONS.**

This month has been remarkably unpleasant, with less clear days and more of cloudy ones, than I find referring to the same month for fourteen years past.

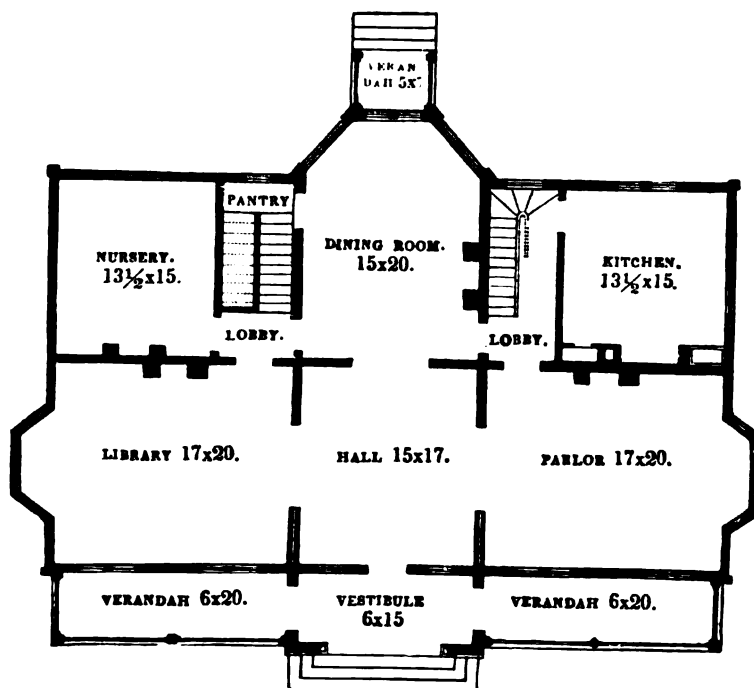
The temperature is nearly three degrees below the mean for the last eight years.

JOHN LEA.

UNIV. OF  
CALIFORNIA



Residence of Wm. A. Hill,  
AT EVERGREEN HAMLET, NEAR PITTSBURGH.



K. F. PETICOLA, Sc.





Vol. III.

FEBRUARY, 1853.

No. 5.

## Miscellaneous.

### ACCLIMATION.

DR. WARDER:—I have read with much pleasure an article in your December number, on the *Acclimation of Trees*, and the cause of their death after cold weather. It is a subject in which I take much interest, and to which I have paid some attention; but I must confess that I find it very difficult to arrive at a truly satisfactory conclusion regarding it. What we require is, a greater number of facts, more numerous carefully conducted observations, and minute chemical analyses.

The Cincinnati Society does not stand alone in its anxiety on this subject. In Silliman's Journal, for January and March, 1852, Dr. JOHN LE CONTE, of Georgia, has presented many facts and some reasoning on the subject, but without satisfying himself. He needs more observations. These articles I have abridged in the Farmer's Companion and Horticultural Gazette, (Detroit, Mich.,) calling the attention of our practical men to the aid they may afford in solving the difficulty.

For some years M. A. DE CANDOLLE, of Geneva, Switzerland, PIOTET, MAURICE, and

CHARLES COINDET, with other European botanists, have turned their attention this way. The first gentleman, in Silliman's Journal, for November, 1852, page 445, prints a very interesting note, a part only of which our limits will allow us to transcribe:—"Cold does not kill vegetation by a mechanical action proceeding from the congelation of the liquid, as some naturalists pretend. We must recognize rather a physiological action; that the vitality of the tissue is destroyed by a certain degree of cold followed by a certain degree of heat, according to the peculiar nature of each plant. The vegetable and animal kingdom, according to this view, will act alike. In the same manner as the gangrene which follows the thawing of a frozen part causes the death of an animal tissue, so the change or putrefaction which follows a rapid thawing will be the principal cause of the death of the vegetable tissue. Cold may act in two ways on vegetation: either *physically*, by the contraction or congelation of the liquids, which often does *not* kill them; and *physiologically*, by an action upon the tissues and

upon vegetable life, which the laws of physics do not account for. The most striking example of this last, is the immediate death of hot-house plants when exposed to a temperature of  $1^{\circ}$  or  $2^{\circ}$  Centigr.,\* which causes no congelation. The action of the same degree of temperature is very different on two allied species, and sometimes on two varieties of the same species."

MULDER, in his great work on the Chemistry of Vegetable and Animal Physiology, does not touch upon this topic. But I would especially direct your attention to a letter in the Patent Office Report for 1850-51, page 183, written by L. Young, of Louisville, Kentucky, as containing some very peculiar facts, which may be of service in this investigation. I quote the latter part of it:—"In 1840, strongly suspecting intense cold to be one of the causes producing blight among fruit trees, and aware that the only symptoms capable of pointing to the true harm-producing agency, are often obliterated by time, before the casual observer suspects the presence of injury, I then determined to invoke the assistance of the unerring instruments of meteorology as sentinels to sound the alarm on every visitation of intensity of heat or of cold, hoping that if either of these violent powers were the culprit I should be able to detect him *flagrante delictu*, or that by a continued record of facts, the case of his guilt might be made out upon the evidences of circumstances.

"In Kentucky, the first remarkable spell of intense cold occurring within the last ten years, happened in December, 1846, a month which would have done credit to a New England winter, its mean being  $26^{\circ}$ , and the thermometer at one time, for the space of forty-eight hours, not rising above

$10^{\circ}$  above zero. For some days the expansion of trees in the forest produced a continued cracking.†

"On the occurrence of a thaw, and immediate examination, many peach-trees were found to have the bark burst throughout the extent of the trunk. The bark on the branches of one or two pear-trees was found to give way at the touch, and out of a lot of sixty hardy young cherry-trees, about half were entirely killed, or so injured as to produce death. In a small orchard of plums, measuring six inches in diameter, and very thrifty, about half a dozen had the bark entirely separated from the alburnum; in most of them the fact not being discernable except by pressure, and when touched the bark being found to hang loosely on all sides of the trunk. In two cases the bark was burst, as in the case of the peaches, and on making any two horizontal sections on the trunk, the intervening bark might have been rolled off. It is needless to add, that these plum-trees all died, and that the first outward evidence of disease or injury in those cases where the bark was loosened, but not burst, was a gradual shriveling of the bark on the coming of hot weather."

I shall only make one remark on these statements. If a tree can not be acclimated so as to bear a greater cold than is natural to it, it appears that a removal to a warm climate renders it more delicate than usual. I have lived here ten years, and most of the time have had from thirteen to seventeen acres of orchard, containing all species of fruit trees. The neighboring orchards are numerous. Yet in no instance have I ever known a tree of any kind killed by frost here, except the Chinese mulberry, which comes up annually. The thermometer has often been as low, and on not a few occasions down to

\* 0 Centigrade equals  $32^{\circ}$  or freezing point Fahrenheit.

† See also L. Young's Report to the Pomological Congress at Cincinnati, Ohio, 1850.—Ed.

zero for a few hours. Last winter a few trees, especially plums, are said to have been killed in the interior of the state, but only under peculiar circumstances. Even in two instances the Chinese mulberry has resisted the frost for several years, and become a tree, but both are now dead as far as the roots. I never knew a specimen of it killed outright, so as not to throw up shoots again. Our soil is a heavy wet clay, or clay loam. Yours, very sincerely,

CHARLES FOX.

GROSSE ISLE, Mich., Dec. 22, 1852.

REMARKS.—This subject is not yet exhausted, and I hope to hear from other observers and writers, who have half promised their aid. Mr. Fox well observes that we require a greater number of facts, more numerous, carefully conducted observations, and minute chemical analyses.

His suggestions as to the greater sufferings of many plants to the southward of his position also opens a new aspect of the question—hinted at in the discussions of the Cincinnati Horticultural Society. The observations of L. Young, and those of others in this region, make it appear a trying latitude for plants; which may be explained by vigorous and late growth, a late second growth, (see effect on plums in the Pomological report from Pennsylvania in this number,) and the trying changes of temperature to which we are subjected during the winter. It should be observed that the climate of Grosse Isle is influenced by the waters of Detroit river and Lake Erie, and by the collections of ice which retard vegetation in the spring.—Ed.

EFFECTS OF IRRIGATION.—Water applied to the soil by irrigation gives many other things besides humidity; it manures, consolidates, deepens the surface mold, and guards against cold—effects as obvious in a northern as in a southern climate.—*Eccl.*

#### Cultivation of Beets.

BEETS will not grow well in unmanured soils. It is true that some soils may be found which are replete with the ingredients for growing beets, but as a general rule this crop requires manure. It is also true that freshly applied manures are not suitable to the growing of beet or other root crops; the application of super-phosphate of lime to turnips alone being an exception. One hundred thousand pounds of beet roots will take from the soil 1481 lbs. of potash, 3178 lbs. soda, 285 lbs. of lime, 133 lbs. of magnesia, 20 lbs. of alumina, 58 lbs. of oxide of iron, 50 lbs. of oxide of manganese, 105 lbs. of silica, 123 lbs. of sulphuric acid, 167 lbs. of phosphoric acid, 380 lbs. of chlorine; making in all 5986 lbs. of inorganic matter as contained in 100,000 lbs. of beet roots, by the analyses of Sprengel.

Now it must be evident, that unless these materials exist in the soil, or are added to it, that this amount of beet roots cannot be grown. It is also true that beets contain a large amount of water, the greater proportion of which is taken from the soil by their roots, and parted with at the surface of their leaves, depositing in the plant all substances in solution before its egress; and therefore it is quite possible that when newly applied to the soil, and not in a proper state of division, that the more soluble portions of these ingredients may be carried into the roots more rapidly than they can be appropriated, and therefore prove detrimental to the growth.

It is also true, that large amounts of ammonia are required by the beet root to stimulate it to the appropriation of these inorganic materials; and therefore, in soils short of any of these materials, the addition of barn-yard manure will not immediately cause their liberation from the ultimate particles of the soil. When they exist in any other than a free state in the soil, lime seems to be necessary to develop them for the use of plants; and it is for this reason that freshly manured soils do not yield large beet crops. If, however, the separate ingredients are combined with a proper proportion of ammonia, and in a proper state of solubility before their addition to the soil, they may be applied directly to the growing crop, or before its being planted, without

harm. Thus we have raised during the present year, as large beet crops as any on record, by the use of the improved superphosphate of lime, and we have many letters from other growers, who have used equal amounts with similar results.

We agree with Mr. Reeve, [an English writer,] that the decay of one plant will furnish the proper pabulum for the growth of another of the same family; but we distinctly deny that the burying of the leaves of the beet as manure to a future beet crop, is either judicious or true. It is true that these leaves, during decay, will furnish so much of the requirements of the beet as they may contain; but that portion of the inorganic requirements which was held by the roots themselves, and has been parted with from the farm, are irrecoverably absent, and the quantity received from the decomposing leaves will prove insufficient for a continuation of the crop in the manner proposed by Mr. Reeve.

His similes to establish this principle are badly chosen. He speaks of the oak-tree being manured by its own leaves for a century; but if he had removed the oak-tree each year, as he does his beets, the burying of the leaves would be found insufficient for the continued production to be removed.

His simile of carnivorous animals flourishing by devouring each other, is no more applicable to the issue in question, than would be the substitution of a worn-out pair of pantaloons for new cloth, in the making of a new garment.

The practical parts of Mr. Reeve's paper we recommend as judicious, but not for reasons given;—in other words, his truths are incidental, while his false reasonings form the leading parts of his communication.—*Working Farmer.*

#### Insects.

A PHILOSOPHICAL study of natural history will teach us that the direct benefits which insects confer upon us are even less important than their general use in maintaining the economy of the world. The mischiefs which result to us from the rapid increase and the activity of insects, are merely results of the very principle by which they confer upon us numberless indirect advan-

tages. Forests are swept away by minute flies; but the same agencies relieve us from that extreme abundance of vegetable matter which would render the earth uninhabitable, were not this excess periodically destroyed. In hot countries, the business of removing corrupt animal matter, which the vulture and the hyena imperfectly perform, is effected with certainty and speed by the myriads of insects that spring from the eggs deposited in every carcase, by some fly seeking therein for food for her progeny. Destruction and reproduction, the great laws of nature, are carried on very greatly through the instrumentality of insects; and the same principle regulates even the increase of particular species of insects themselves. When aphides are so abundant that we know not how to escape their ravages, flocks of lady-birds instantly cover our fields and gardens to destroy them.—Such considerations are thrown out to show that the subject of insects has a great philosophical importance; and what portion of the work of nature has not? The habits of all God's creatures, whether they are noxious or harmless, or beneficial, are worthy objects of our study. If they affect ourselves, in our health, or our possessions, whether for good or evil, an additional impulse is naturally given to our desire to attain a knowledge of their properties. Such studies form one of the most interesting occupations which can engage a rational mind; and perhaps none of the employments of human life are more dignified than the investigation and survey of the workings and the ways of nature in the minutest of her productions.—*N. E. Cultivator.*

#### Evergreen Hamlet.

[SEE FRONTISPIECE.]

In the previous number it was my duty to offer an apology to those interested in the place here referred to, and to those who are waiting for some further intelligence respecting the plan involved. I had hoped to have visited the spot itself during the summer; but now give a notice from a Pittsburg paper, and also furnish, as a Frontispiece, a fine wood-cut copy of the residence of W. A. HILL, one of the energetic movers in this

enterprise of a social community, which certainly has charms in prospect, if the plan can only be realized.

The Frontispiece of this number is a representation of the residence of W. A. Hill, one of the first improvements that was made in this interesting hamlet. By reference to the exterior, it will be perceived that the projectors intend to set a good example of refined taste to their successors, and the ground-plan gives evidence that comfort within the building, as well as external appearance, has been carefully and successfully studied.

Where is "Evergreen Hamlet?" we imagine we hear the reader asking. Be patient, and you shall know. After crossing either of the fine bridges which span the beautiful Alleghany, you drive to the upper end of Alleghany City, and then run over the Butler Plank Road, along the margin of the Pennsylvania Canal, until you arrive at Stewartstown, at the mouth of Girty's Run; then you drive up Girty's Run about two and a half miles, when you will see, perched on a commanding hill-side, some beautiful cottages. This is Evergreen Hamlet.

A number of gentlemen of this city, about a year ago, determined to select a retired, healthy, and beautiful location, somewhere in the vicinity of Pittsburg, where they might build houses to suit their own convenience, with ample grounds around, and have all the enjoyments and pleasures of city and country life combined. For this purpose they purchased about eighty-five acres of land, in a retired and romantic spot, on Girty's Run, about an hour's drive from the city.

They entered into an association, and established a constitution by which to be governed.

Each member, upon the payment of a certain sum of money when entering the association, is entitled to one acre of ground upon which to build, and a share of the products or profits of the cultivated land. The association employs a farmer and gardener, who works the land and superintends their affairs, and his salary is paid by an equal assessment among the members. An ac-

count is kept of the products of the farm, and each member of the association is allowed to purchase any article he pleases at a fixed price, which is about one-half the ordinary market rate. All that is raised and sold beyond what is necessary to supply the wants of the members, is taken to the city, disposed of like other marketing, and an account kept of the proceeds. The association have one large stable and carriage house, and one hostler attends to all their wants in this respect, which obviates the necessity of each member of the association going to the expense of employing his own hostler.

There are some nine or ten members of this association, three of whom, William A. Hill, William M. Shinn, and R. E. Sellers, Esqs., have built houses and are now occupying them, at Evergreen. Messrs. Wade Hampton and John Nichols are now building, and the other members of the association will build hereafter. The houses already erected are of the most beautiful style of modern architecture, and are surrounded with every comfort and convenience imaginable.

Mr. Hill's residence is constructed in the pure Gothic style, and is in all respects a model dwelling-house. We have never been inside of a house that was better arranged in all respects to suit the wants of a family. As these improvements are all new, it will necessarily be some time yet before the grounds around present that beautiful artistic appearance which the enterprising proprietors design they shall exhibit. A great many choice fruit trees have been set out, and in a few years there will be an abundance of all kinds of fruit that are pleasing to the eye and pleasant to the taste.

The drive to Evergreen, especially up Girty's Run, is delightful. This stream, which is named after Simon Girty, the renegade, runs through a deep and dark ravine, which is lined with maple, oak, chestnut, sycamore, hemlock, beech, walnut, and many other varieties of trees, whose broad branches extend overhead and almost hide the sun from view.

A good plank road is now being constructed up this run, which will be completed before winter, and which will greatly lessen the time required to trot a horse from the city to Evergreen.

**Agricultural Bureau.**

THE following article, from the Cincinnati Commercial newspaper, so pleased me on its perusal, that it was immediately seized for copy. The exciting cause which stimulated Mr. Lee's brain to this effort, was the recent removal of Mr. Ewbank from the Patent Office, which has been attributed, by the eastern papers, to his having unadvisedly dismissed Dr. Lee, the excellent and indefatigable Agricultural Clerk of the Patent Office. The cause stated by Mr. Ewbank was a want of funds.

If Mr. Ewbank's excuse for the removal of Dr. Lee is founded in truth, it would seem to imply that our government has neglected or refused to appropriate the funds required to defray the necessary expenses of that branch of the Patent Office to which has been assigned the promotion of the agricultural interests of the country. We do not know that this is the fact; but we infer as much from the statement contained in an article in the New York Tribune, which appears to have been prepared from data furnished by Mr. Ewbank.

We have never examined the constitution of the United States with special reference to this subject, and are not prepared to say what the ingenuity of strict constitutionists might, or might not find in that instrument to prohibit the government from extending the science and improving the art of agriculture, by lending its aid to investigations and experiments undertaken with a view to that object. But we have long been convinced that the creation of an Agricultural Bureau, in connection with some of the executive departments, or as a separate department of the government, is a measure demanded by considerations of vital importance to the future well-being of this country.

This subject, several years ago, excited some discussion in the country and in Congress; but it resulted in nothing more decided than a tacit permission to the Secretary of the Interior, or the Commissioner of Patents, to employ one clerk, whose duty it should be to collect and digest such information tending to throw light on the science and art of agriculture, as he could procure.

We believe that no funds were placed at the disposal of the office, to be appropriated to this object; and hence it was forced to rely upon such voluntary contributions and assistance as could be obtained from the intelligence, courtesy, and enterprise of the scientific and practical agriculturists of the country. Dr. Lee has filled this office with signal ability; and notwithstanding the almost insurmountable obstacles with which he has had to contend, has made important additions to our knowledge of the actual agricultural condition and resources of the United States: and has done much to bring the wants of that great interest prominently before the government and the people. The agricultural part of the Patent Office reports, for the last two years, has contained a mass of valuable statistics, experience, and scientific information, very useful to the farming community.

We have read these reports with much interest and instruction. They abound in valuable suggestions to the practical farmer, and in curious and desirable information for the general reader. The partial investigations already made, even under the discouraging auspices we have mentioned above, have conclusively demonstrated the great importance of disseminating among our farmers a more thorough knowledge of the science and art of agriculture than they can possibly acquire from their own partial experience, individual effort, or the researches of private associations.

Labor and capital employed in the tillage of the earth, is certainly as worthy of legislative consideration and government patronage, as labor and capital employed in manufactures, commerce and navigation. In a national point of view it is probably of more value than all three of the last-named interests combined. The regular and continued productiveness of the soil, is an object of greater importance to the people than any political measure whatever. The sources from which we obtain our bread and meat, and clothing, demand our first attention, and should not be neglected by a government which exists only for the public good.

A great principle is involved in the science of agriculture, which reaches through remote ages and generations, and forms the basis of all possible improvements, and the

highest hopes of our race. As a nation of farmers, it is our duty, as well as interest, to inquire by what means, and upon what terms, the fruitfulness of the earth, and the health and vigor of its products, may be always maintained, if not forever improved. As showing the necessity of the adoption of a more intelligent system of farming than has hitherto prevailed in the United States, statistical tables very carefully prepared and published in the Patent Office Report of 1851, show that we annually waste enough of the elements of bread, without which not the first kernel of corn can be formed, to produce one thousand millions of bushels of this important staple. The same is true of some other branches of production.

That a persistence in this ruinous system must ultimately result in impoverishing the soil of the whole country, is a conclusion from which we can not escape. Investigations made within the last few years, show that in some parts of the Union the process of deterioration has made alarming advances toward an entire sterility of the soil. That this evil, existing and prospective, is the result of bad tillage, is susceptible of demonstration. We have not space here to show the process. Every scientific agriculturist, and every thoughtful observer of the system of farming which obtains to a great extent in the United States, fully understands it, and must deplore the inevitable results, unless they shall be arrested by a wise and liberal policy of the federal government. What was it produced the famine in Ireland, and precipitated so many starving men and women on our shores? The answer is easy. This fearful calamity was produced by the mad and foolish system of farming which had been pursued in that country for several years previous. And in this connection, we may remark, *en passant*, that the immense influx of foreign emigrants into the United States, and the increased consumption of provisions incident thereto, require of us a more careful attention to the means of increasing the supply in proportion to the demand.

The creation of an Agricultural Bureau, or the annual appropriation by government of an adequate sum of money, to be devoted to investigations and experiments in the science and art of farming, and in obtaining from other countries all which

their experience and researches have learned in this branch of knowledge, and the dissemination of the information thus obtained among our own agriculturists, would unquestionably produce the happiest results. We conceive it to be an object of sufficient importance to merit the most serious attention of government. It would not only arrest the deterioration which the soil is now suffering from bad farming in all parts of the Union, but would, in a few years, lead to the entire restoration of those parts of the country which have already been exhausted. This is a duty which government owes to future generations, whose lot it will be to toil and struggle upon the scene, which to us is almost one of unmingled happiness. Far different, however, will it be to the unborn millions who are to come after us, if, through our improvidence, they are destined to succeed to an impoverished and exhausted inheritance.

The discoveries of modern science have in no other regard so important a connection with the practical interests of mankind as in the improvements they have introduced in agriculture, and the light they throw upon the science of cultivation. These discoveries, if men are wise enough to avail themselves of the knowledge which they impart, will go far to falsify all the theories of those melancholy philosophers and political economists, who have announced the coming of a period, when the earth, from over population, would be unable to subsist her children, and become the scene of unimaginable horrors. We hold it to be one of the first duties of government to adopt such measures as will enable our agricultural interest to avail itself of the knowledge which is so imperatively demanded by the wants of this and future generations.

#### Number of Species of Plants.

From an article on "Plants and Botanists," in the *Westminster Review* for October, we gather a few facts on this subject which may interest some of our readers. One hundred years ago, Linnæus "took a census" of the vegetable kingdom, and proclaimed that 5,938 distinct and different species were known to himself and his brother botanists. Half a century afterward, the estimate had increased fivefold. Five

years ago, Dr. Lindley, in his "Vegetable Kingdom," announced 92,920 known species of plants. There are whole geographical provinces as yet very imperfectly explored by botanists, and some few regions altogether unknown. In many whose floras have been subjected to diligent scrutiny, much more remains to be done. Taking all deficiencies into consideration, and probabilities of future discovery, the reviewer thinks we may fairly accept Meyer's calculation of *two hundred thousand* species as about constituting the entire vegetation of our planet in its present state. And even this estimate, large as it may seem, is perhaps under the mark, if we bear in mind how little has yet been done toward the examination and description of microscopic beings, claiming to rank as vegetables.—*New England Farmer*.

#### Water-Proof Paints.

A WRITER in a late number of the Scientific American, who gives the initials of S. C., and dates at Lebanon, in this state, supplies us with the following information with regard to paints, that may be useful to the readers of our paper:

Cheap and useful paint for roofs, walls, fences, outside plastering, etc., may be made by using tar—common tar or coal tar, made thin with spirits of turpentine. Let this be used instead of linseed oil, and to form the body, add fine earthy matter, such as dried clay or soft burnt bricks ground fine in a plaster mill.

The soft shaly slates of different colors, like the "Ohio Paint," also answer a good purpose, when finely pulverized, to form the body of the paint. For the coarsest kind of work, dry fine sandy loam may be used as a body. Any of these earthy bodies when made sufficiently fine can be used to good purpose in painting either with the tar mixture or oil. Plastered walls on the outside of buildings may be thus rendered water-proof and lasting by using the above cheap paints, and after one or two coats, it will take but a small quantity of oil paint with lead, to make a fine finish with a single coat of any desired color. Whenever a surface thus rendered impervious by this cheap means, is painted over with oil and lead, a single coat upon the surface, instead of be-

ing absorbed, will dry in a thin tough film on the surface, and be more effective than three coats of the same paint put upon an unprepared surface, which like that of common wood-work, absorbs the oil from the lead.—*Ohio Farmer*.

#### Good Paint for Brick Dwellings.

A WRITER in the New York Tribune, remarking on the Milwaukie brick as a handsome building material, says that it is too expensive, and that the same effect can be produced by a cheap kind of paint, more suitable, and far cheaper for coloring brick than *oil paint*, which is very expensive. He says, oil paint is expensive, and is not, when on, just the thing for brick; but a paint may be made *for brick* without any oil, much better than with. The brick dwelling in which I reside, has a coat of paint upon it which has been there several years, and is now quite as fresh as when painted, and likely to remain so a great many years more. The basis of the paint is common lime mixed with water. Sulphate of zinc is the fixing ingredient. The requisite shade may be made by adding colors used by house painters. I have now in my mind buildings that have been standing quite a long time without the renewal of paint. The composition costs but little more than common white-wash. The same may be varied by adding Venitian red, or yellow ochre, or burnt sienna, (to suit the taste,) and the sulphate of zinc. This paint was highly commended by the late A. J. Downing—good authority in such matters. It forms a cement with brick which nothing but the severest friction will remove. I have seen quite a number of buildings with Milwaukie brick fronts; but have noticed a dull, rusty look about the edges of the brick that materially destroys the good effect of the cream color. A much clearer and richer cream color may be attained by using the common red brick with this composition, with yellow ochre for the coloring matter. For country houses, a somewhat more lively and warmer color may be obtained by the addition of Venitian red to the ochre in small portions.—*Ibid*.

NOTE.—These articles on Paints are recommended to the readers as worthy of consideration. There is a sad lack of attention to the outside ornamenting of many of our dwellings and public buildings; careful attention to which would exert a fine moral effect.—*Ed*.



### Scenery, Climate and Productions of the North-west.

In the *Western Journal and Civilian*, published monthly in St. Louis, among many valuable papers, there is one which attracted my attention. It is a review, by Dr. Prout, of "*The Arctic Searching Expedition; a Journal of a Boat Voyage through Rupert's Land and the Arctic Sea, in search of Sir John Franklin: By Sir John Richardson.*" Instead of referring to the book itself, not now at hand, I have marked some of Dr. Prout's selections, as possessing interest to the physiological and botanical readers of this work:

The vegetation of this district, Athabasca Lake, is thus described:—The oaks, the elms, the ashes, the Weymuth pine, and pitch pine, which reach the Sackatchewan basin, are wanting here, and the balsam-fir is rare; but as these trees form no prominent feature of the landscape in the former quarter, no marked change in the woodland scenery takes place in any part of the Mackenzie river district, until we approach the shores of the Arctic sea. The white spruce continues to be the predominating tree in dry soils, whether rich or poor; the Banksian pine occupies a few sandy spots; the black spruce skirts the marshes; and the balsam-poplar and aspen fringe the streams; the latter also springs up in places where the white spruce has been destroyed by fire. The canoe-birch becomes less abundant, is found chiefly in rocky districts, and is very scarce north of the Arctic circle. It still, however, attains a good size in the sheltered valleys of the Rocky Mountains, up to the sixty-fifth parallel. Willows, dwarf birches, alders, roses, brambles, gooseberries, white cornel, and mooseberry, form the underwood on the margins of the forest; but there is no substitute for the heath, gorse and broom, which render the English wild ground so gay. On the barren lands, indeed, the heath has representatives in the Lapland rhododendron, the *Azalea*, *Kalmia*, and *Andromeda tetragona*, but these are almost buried among the *Cornicularia* and *Cetraria nivalis* of the dry spots, or the *Cetraria islandica*, and

mosses of the moister places, and scarcely enrich the colors of the distant hills.

The clustered nests of large colonies of the republican swallow (*Hirundo fulva*) adhere to the ledges of the limestone cliffs, and the bank swallow has pierced innumerable holes in the sandy brows [bluffs?]

Some idea may be formed of the temperature of this latitude, 60° N., in July, from the following extract:—The power of the sun this day, in a cloudless sky, was so great, that Mr. Rae and I were glad to take shelter in the water, while the crews were engaged on the portages. The irritability of the human frame is either greater in these northern latitudes, or the sun, notwithstanding its obliquity, acts more powerfully upon it than near the equator; for I have never felt its direct rays so oppressive within the tropics as I have experienced them to be on some occasions in the high latitudes. The luxury of bathing at such times is not without alloy; for if you choose the mid-day, you are assailed in the water by the *Tabani*, who draw blood in an instant with their formidable lancets; and if you select the morning or evening, then clouds of thirsty musquitos, hovering around, fasten on the first part that emerges. Leeches also infest the still waters, and are prompt in their aggressions.

The following notice of the limit of the Cerealia is interesting:—Barley is usually sown here (Fort Simpson) from the 20th to the 25th of May, and is expected to be ripe on the 20th of August, after an interval of ninety-two days. In some seasons it has ripened on the 15th. Oats, which take longer time, do not thrive quite so well, and wheat does not come to maturity. Potatoes yield well, and no disease has as yet affected them, though the early frosts sometimes hurt the crop. Barley, in favorable seasons gives a good return at Fort Norman, which is further down the river; and potatoes and various garden vegetables are also raised there. The sixty-fifth parallel of latitude may, therefore, be considered as the northern limit of the *Cerealia* in this meridian; for though in good seasons, and in warm, sheltered spots, a little barley might possibly be reared at Fort Good Hope, the attempts hitherto made there have failed. In Siberia it is said that none of the corn tribe are found north of 60°.

But in Norway barley is reported to be cultivated, in certain districts, under the seventieth parallel. It takes three months usually to ripen on the Mackenzie, and on our arrival at Fort Simpson we found it in full ear, having been sown seventy-five days previously. In October, 1836, a pit sunk by Mr. McPherson, in a heavy mixture of sand and clay, to the depth of sixteen feet ten inches, revealed ten feet seven inches of thawed soil on the surface, and six feet three inches of a permanently frozen layer, beneath which the ground was not frozen.

In nine hours after leaving Fort Simpson our party gained the first view of the Rocky Mountains, which are described as follows:—When the mountains are first seen, in descending the river, they present an assemblage of conical peaks, rising apparently about two thousand feet above the valley; and it is not until we come opposite to the end of the first mountain, that we observe them to be disposed in parallel ridges, having a direction of about south-southwest and north-northeast; which makes an angle of rather more than forty-five degrees with the axis of the great chain, from which they project like spurs. The circumstance of the valleys pervading the chain transversely, though with more or less of ascent, explains the reason of the principal rivers on both the eastern and western slopes having their sources beyond the axis of the range, and flowing through it. From some passages in Dr. Hooker's letters I infer that the Himalayas have a similar configuration.

It is evident from the following account, that a student of nature may find more to interest him in this ice-bound region than he ever dreamed of in his boldest closet reveries:—As has been already said, the general aspect of the forest does not alter in the descent of the Mackenzie. The white spruce continues to be the chief tree. In this quarter it attains a girth of four or five feet, and a height of about sixty in a growth of from two to three hundred years, as shown by the annual layers of wood. One tree cut down in a sheltered valley near Clark's Hill, measured the unusual length of one hundred and twenty-two feet, but was comparatively slender. Most of the timber is twisted, particularly where the

trees grow in exposed situations. The Banksian pine was not traced to the north of Great Bear Lake River; but the black spruce, in a stunted form, is found on the borders of swamps as far as the woods extend. The dogwood, silvery oleaster, (*Eleagnus argentea*.) *Shepherdia*. and *Amelanchier* grow on banks that in Europe would be covered with gorse and broom, and the southern *Salix candida* is replaced by the more luxuriant and much handsomer *Salix speciosa*, which is the prince of the willow family.

Besides these the *Hedysarum Mackenzii* and *boreale*, the *Dryas Drummondii*, the *Androsace Chamæjasmi*, *Calipso borealis*, the lady-slipper, (*Cypripedium*.) and many other flowering plants adorn, and many feathered inhabitants enliven the forests of this district on the borders of the Arctic.

"The cheerful and familiar *Sylvia æstiva* is one of the earliest arrivals in spring, coming in company with the well known American robin, (*Turdus migratorius*.) and the purple and rusty grackles. A little later, the varied thrush makes its appearance from the shores of the Pacific. The white-bellied swallow (*Hirundo bicolor*) breeds, at Fort Norman, in holes of rotten trees; and the *Sialia arctica*, a representative of the blue-bird, so common in the United States, enlivens the banks of the Mackenzie, coming, however, not from the Atlantic coasts, but from the opposite side of the Rocky Mountain range. On the Mackenzie, there is an intermingling of the floras of both coasts, as well as of the migratory feathered tribes, the Rocky Mountain range not proving a barrier to either."

#### Gypsum, or Plaster of Paris.

Gypsum, or sulphate of lime, differs from the carbonate of lime (marble) in this respect: when heated, it retains its acid, while the carbonate is decomposed by the process.

Gypsum is widely diffused, and in some localities is found in immense quantities. Near Windsor, at the mouth of the St. Croix, and on the Avon, these rivers are distinguished by lofty cliffs of this mineral. The undulating appearance of that region of country is attributed in a great degree to the numerous swallow holes and sinkings

which have been produced by a gradual solution and removal, by surface water or by springs, of the gypsum from beneath. So in the Cumberland basin, in some parts of New Brunswick, and along the upper beds of the Onondaga salt group, and the base of the Helderberg limestone in western New York. At Cape Desmoiselles, up and down the river are cliffs of gypsum, eighty and one hundred feet high. In New Brunswick, on the Salmon river, quarries and swallow pits occur. The surface here is described as abounding in sinks and pits, like round artificial wells, from one to twelve feet deep. "One great hollow rim seems to encircle the area over which were spread these smaller ponds and pits, intermixed with ravines and cliffs, caused by the pits falling or merging into one-another. While portions of the deposit were being dissolved out in detail, and carried off through the porous wells, the whole area was sinking in a mass, destined no doubt in time to become one of those extensive ponds or swallows, such as I had previously seen on the rich land east of the Amherst marshes, and in the country above Windsor, in Nova Scotia." In the last named place it is the chief article of export, being carried in its rough state into Maine and elsewhere, thereby avoiding the duties laid upon the importation of manufactured articles.

Whether gypsum is a *fertilizer* or only an *ameliorater* seems to be questioned. But the fact is abundantly shown that it tends, when properly applied, to improve the growth of various crops. In New Brunswick the farmers do not avail themselves very extensively of this mineral. Some experiments there seem to exhibit no proofs of marked effects, while in other instances oats and grass have received very decided benefit. In one instance it is reported to have produced a crop of clover where none had before been seen. In Maryland the application of a bushel to an acre is said to have produced wonderful effects; and in Pennsylvania and New York, its application has been productive of good on limestone soils. In New Brunswick are found growing upon the pure gypsum, young and healthy trees, as well as large and old cypress trees and white birches, with some firs of a luxuriant growth.

REMARKS.—Gypsum also occurs in our own state, on Sandusky Bay, where it is extensively worked for architectural and agricultural purposes. It is not my intention at this time to enter into the merits of the question of its action upon plants, but merely to indicate a few of its uses, and to urge its application by gardeners and by farmers, as a supply of the ground plaster may now be obtained at the store of the brothers Marsh, corner Fourth and Sycamore, Cincinnati.

It is a valuable component of all composts.

It is a disinfecting agent: hence a valuable manure, because it absorbs ammoniacal gases and retains them for the food of plants.

It is known to exert a beneficial influence upon most kinds of vegetation.

For experiment, about towns especially, where it can always be obtained, the magma or soft mass, the refuse of the manufacture of soda water, has been obtained, and found to have been very serviceable.—ED.

#### Coloring Matter of Plants.

It has been said, and truly enough, that vegetables create what animals borrow. From the elements composing the inorganic world, the plant elaborates the albumen, the gluten, and the fatty matter which constitute the flesh of animals. There is a peculiar green coloring matter found in plants, easily observable by the aid of the microscope, generally as minute oval or rounded green globules, which has been termed *chlorophyle*, or green resin of plants. It is easily obtained by stripping off the rind, or sheath of any of our common grasses, and then lightly scraping the denuded part. It is soluble in alcohol, and is composed of a coloring matter combined with a vegetable fat capable of crystallizing. The coloring matter of chlorophyle, is found by M. Verdil to present the greatest analogies with the red coloring principle of the blood; thus bringing us one step nearer to the demonstration of the proposition, that every compound

found in the animal frame, is first formed in the vegetable. This coloring matter may be easily isolated, by precipitating the boiling solution of chlorophyll in alcohol, by a small quantity of milk of lime; the alcohol retains the fat; the coloring matter, precipi-

tated by the lime, may be separated by means of hydrochloric acid and ether, which dissolves it, forming a colored stratum at the top of the liquid; by evaporating the ether, it may be obtained in a state of perfect purity.—*Annals of Science.*



## Pomology.

### PART OF THE REPORTS FROM PENNSYLVANIA.

TO THE AMERICAN POMOLOGICAL SOCIETY.

THE heavy limestone soils of the larger valleys are not so fully favorable to the health and bearing of fruit trees as the superincumbent shaly strata. The limestone clay—most productive as it is of grain—seems too strong and rich to suit exactly the simpler tastes of fruit trees. Wild fruits of superior flavor are abundant on the debris of shales and slates around the valleys, while in the limestone floor they are sparse. In the lap of the mountains, too, some hundred feet above the level of the valleys, frosts do not occur so late in the spring or so early in autumn; the steep mountain in close proximity seems to radiate warmth enough to repel moderate frosts.\* Yet many sorts of apple and pear, and most plums and grapes—fruits that will bear high feeding—are of superior quality in the valley grounds. On rocky hills and ridges in the valley where the soil is naturally well drained by the cavernous limestone beneath, cherries and peaches do well—yielding finer specimens of fruit than on the mountain slopes, where the trees are exhausted by constant bearing.

\*Or perhaps this situation enables the cold air to flow down into the valley, and thus depress the temperature of the lower position.—ED. W. H. REVIEW.

*Supply of Fruit.*—Within ten years many apple orchards have been planted, and much grafting has been done. Previously most of the orchards consisted of seedling fruits, and among the thousands of these seedlings we find one here and there of fine quality.

Apples do well—yielding, I should say, two full crops, and failing entirely once in five years. Pears bear equally well. Cherries and plums very seldom fail. Peaches, a failure about every other year. Grapes are very certain.

A family of eight persons, having free use of fruits during the entire season, consumes three bushels of apples to one of wheat, and in proportion of other fruits, and with the greatest advantage to their health.\* But we have scarcely an approach to such a supply. It would be a vast benefit to the country, morally and socially, if we had.

We all have strong appetites for fruit, and plenty of it we all need; but begging and plundering violate the conscience, and irregular hurried gorgings of unripe and green fruit fret the stomach.

*Difficulties.*—We have a moderate share of the insects, diseases, etc., which disturb fruit trees, and against which it is man's

present lot to contend; yet we are exempt from many that are injurious elsewhere.

Apple orchards grow well everywhere. The worst enemies to the trees are the *plow* and the *ax*, the first crushing through and shearing of the roots, in the frequent process of summer fallowing for grain; and the latter, used to hack off the dead limbs, usually leaves the stumps split and chipped up so as to receive and retain the rain. Caterpillars are not numerous, and are easily destroyed. Aphides seldom injure any shoots but the over-luxuriant and crowded ones that follow the severe use of the pruning knife and grafting saw. Canker-worms and borers are unknown here. Sawyer-worms, however, sometimes cut off young trees, especially where raw chip-dirt has been used. I think the most obnoxious pest we have in apple culture is the worm at the core; in some seasons very few summer or fall apples are clear of it.

**PEARS**—Are scarce, but do well when they are allowed to grow naturally. There has been no blight (except in rank young shoots) for many years. Trees trained to long unshaded stems do not grow well; the bark dries, and growth gradually ceases. Raw manure, and especially strong animal manure, I have found to be very prejudicial to the growth and health of the pear-tree.

**PLUMS**—Are much planted and are very fine. The larger kinds rot in wet seasons; the smaller ones do not; per contra—the larger kinds (which usually have large leaves) do not suffer from leaf-blight, while smaller ones do to a very wide extent. The leaves blight and fall off before the fruit ripens, often leaving nothing at all on the branches but the fruit. During the growing weather of August and September, the trees commence a new growth, blossoming as in spring; but this growth is arrested in its midst by frost, which, acting on the trees in this unprepared state, full of watery sap, destroys them by thousands.

The black knots are occasionally seen on trees brought from counties north or east of Center. It has broken out for me at intervals during ten years, but I have always cut it away promptly, and it has never spread; but I have seen sprouts or seedlings from diseased trees, in which it appeared to be too deeply seated for eradication. The curculio is as destructive here as

in other places, seldom leaving a plum, if suffered to work unmolested. The plan of keeping small swine in the plum yard, has been tried here for five years, and with entire success. The insects are not entirely driven off, but they are reduced so much that they hardly thin out the fruit as much as is desirable.

**PEACHES**—Have done but ill with us for some years past. The yellows have swept off thousands of trees, and those remaining are weakened so much by the curled leaf in spring (as plums are by leaf-blight) that we rarely enjoy good peaches. We have some hope that we are through the worst in regard to these diseases.

**GRAPES and CHERRIES** do extremely well.

#### NOTES ON PARTICULAR VARIETIES.

**Summer Apples.**—The American Summer Pearmain is not so fine here as described—but good. Bough and Blush and Summer Rose are very fine, fair, and productive. The latter is the best apple between Yellow Harvest and Summer Queen, (both of which are excellent here) and with us, at least, it proves to be an excellent bearer. English Codlin coddles here as well as in its native land, where it has passed into a proverb for its supreme excellence as a stewing apple, but it is often blotched and knotty. Summer apples of the best English sorts, invariably become too acid under our sun [!] Red Astrachan (from north of Europe) is acid and dry.

**Autumn Apples.**—We have a Butter Apple here that is valuable in its season, for cider and apple-butter. Sweet Russet is an excellent apple for cooking in cider. Both are fair and great bearers. The Rambo, the Smoke-house, and Fall Pippin, are preferred to all others of the season, for the table (so far as varieties have been proved here.) Republican Pippin seems to bear but poorly, and the first-fruits at least are not fair.

**Winter Apples.**—Newtown Pippin is often inferior. If the stem of this tree is trimmed up to full standard height, the bark becomes very dry and rough, and the top seems to starve even in strong soil. Rhode Island Greening, Bellefleur, Spitzenberg, are fully up to their characters here. Fallen-walder is a great bearer of very fair large apples, wanting flavor. The Winter [Autumn?] Strawberry and American Golden Russet

are fine bearers and excellent fruits. Michael Henry Pippin, Sweet Vandervere, and Carthouse, and Golden Russet (so called) are extraordinary bearers. The Michael Henry is mild, rich, sweet, and not so high-flavored as Ladies' Sweet. Carthouse or Romanite keeps very well, but it has more juice than flavor, and is of small size, yet it is a valuable apple.

*Cherries.*—I note little difference in our experience from the general appreciation of particular varieties. Black Tartarian bears here even better than Black Eagle, and Elton seems as hardy as any.

*Plums.*—It does not answer, by any means, to judge these by one or two years' exhibit of their fruit, some sorts vary so greatly; among these Lawrence Gage and Red Gage. Washington maintains its character pretty well, provided it does not rot. Green Gage varies. So does the Apricot plum, which is always too acid, and is not fit for culinary use, being a cling.

*Grapes.*—The *Catawba* is often too late in ripening. The rank growth of the *Isabella* does not always mature, and is sometimes winter-killed. York Madeira is fully equal to either in flavor, (though differing) and is earlier, very hardy and prolific.

WILLIAM G. WARING.

BOALSBURG, Center County, Pennsylvania.

CUMBERLAND NURSERIES, Carlisle, Pa.,  
September 8, 1852. }

In submitting a report upon the various fruits of this district, I would remark, that owing to the past unusually severe winter, followed by a cold and frosty spring, many of our fruits have been injured, and therefore a satisfactory report on many Peaches, Pears, and other fruits new to this section, must be postponed for another season. I shall endeavor to collect such facts with regard to the fruits of this district, as my limited experience and observations may furnish; and should I, from a sincere desire to pursue pomology honestly, discard or take exceptions to varieties of which other pomologists have spoken more favorably and considered worthy of cultivation, I would respectfully claim their indulgence, and beg them to believe that my remarks are given from strictly honest motives. It is to be hoped that such a course will govern all the Committees of the Pomological Congress,

and if pursued, a mass of facts will be made public which will promote the cause and inspire confidence, especially in those who will not be present to participate in the proceedings.

I shall commence with some of our Seedling Apples, and such as are confined to the central portion of the state.

1. Rule's Summer Sweeting.—Origin on the farm of Jesse Rule, of Cumberland county, Pennsylvania. Much boasted of by some, size medium, color yellow, form oblong; season August; tree a fine grower, in which I presume some of its merits consist. I consider it third-rate, and would not plant it at all.

2. White Spice.—This is a noble summer apple I have not been able to trace further than the orchard of H. H. Bowman, of Cumberland county, Pennsylvania. Size large, regular, round, somewhat flattened, sub-acid, with a peculiar spicy and agreeable flavor, coming in as almost first-rate; season, September; I would plant one in an orchard of twenty-five trees for home use, and for market, many more. [Spice Sweet?]

3. Lancaster Queen.—I am led to believe that this originated in Lancaster county, of this state. It is much like Summer Queen in flavor, season, and general character, but has a longer stem, is not quite so large, and the tree grows very differently; it has also a peculiar spicy flavor, which the Summer Queen has not, [?] in consequence of which some prefer it. It may yet prove synonymous with some other.

4. Early Red Sweeting.—This I find throughout the central part of this state, and have not yet been able to ascertain its origin. It is rather a fair second-rate sweet apple, very early and prolific, of medium size; I do not consider it worthy a place in a small collection.

5. Red Ox Apple.—Of Mifflin county, in this state, is much praised by some; but as it comes at the same time with the Queen Apples, and is inferior to them, further remarks are unnecessary.

6. Cumberland Seedling.—I can not trace further than the orchard of Mr. Hull, Cumberland county, Pennsylvania, where I now think the original tree stands; the fruit is second-rate, sub-acid, form rather flat, always perfect, uniform in size; October to December; tree grows finely, very hand-

some, a great bearer. I should consider it an acquisition for market.

7. Pink Sweeting.—Quite a small apple, but unsurpassed for perfect form and prodigious crops, with beautiful red and pink stripes; it is of a pleasant spicy, sweet flavor; perhaps only second-rate, yet from its perfect and uniform size, together with its great bearing qualities, it might be considered worth planting as an autumn sweet apple, and for stock feeding, it is certainly one of the best. Originated with William Keller, of this county; season, September and October.

8. Imperial Vandervere.—Of Adams county, Pennsylvania, no doubt a seedling of the Smoke-house, and as the season is much the same, also the appearance and flavor, I do not think that I would be justified in giving a preference to that old and favorite Pennsylvania apple. If there be any difference, it is rather a coarser apple with me. [This bears no relationship to the Vandervere of Downing.]

9. Better than Good.—Evidently one of the very best winter, sub-acid, table-apples now under cultivation in central Pennsylvania. Size medium, color white, form regularly round, with a slight taper toward the calyx; tree rather slender, and somewhat irregular in growth, but forms a fine and spreading tree which produces (if it has a fault) too great a crop to give them the true flavor, yet by judicious pruning this can easily be obviated. I first received it from Lancaster county, but can not trace it to its true origin, but once received the description of an apple called *Juicy Bite*, which strikingly corresponded with this; such would certainly be an appropriate name.

10. Lancaster Greening.—This fine, hardy, vigorous and prodigious bearing variety, was fruiting for years in the orchard of David Longenecker, of Lampeter township, Lancaster county, Pennsylvania, and from its greenness and long holding in autumn, in spite of frost, it was never gathered, until on an occasion when apples were extremely scarce, they were gathered (with permission of D. L.) by my father. The result was, that in April and May, these apples were prime. Size medium, very regular and fair, tapering considerably to the calyx; color green, with numerous spots and blotches; flesh green, juicy, sub-acid, with quite a

pleasant second-rate flavor; fruits very well even when young, and will keep till April and May with ease.

11. Heterich.—Raised from seed by a Mrs. Heterich, of this county, about twenty years ago; it is considered a decided favorite by those who have been propagating it since, but I can not think it above second-rate. As it is of medium to large size, a fine bearer, always perfect, and of a fine yellow color, it might be worthy of note as a market apple; form is regular, round, a little flattened, flavor slightly acid, and in use from November to January. Tree an irregular grower but fine bearer.

12. Pittsburg Pippin.—Said to have been introduced about Pittsburg fifty years ago, by an old Swiss grafter, who stated that he brought it from his father-land. However, all that I can trace in this vicinity, and in a few adjacent counties in Maryland, seem to be about the boundary line of Lancaster and Dauphin counties, where it has been in cultivation for thirty-five years, and the probability is, that the old Swiss is right, and it was sent from Pittsburg many years ago to some of the enterprising old German pomologists. Its character seems at times to betoken a foreign origin here, from the fact that it is less productive than some others, and has a deficiency in its core; yet its fine size, and high, pleasant, sub-acid flavor, make it a great favorite for early winter; and were it it as prolific as the Rhode Island Greening, would supersede that variety. Size large, form flat, tapering to the calyx, color greenish white, becoming yellow at maturity, flesh before ripe breaking, but becoming very tender, juicy and pleasant; season November to February.

13. Cut Pippin.—Named from a peculiar mark running round the fruit, as if a string had been drawn round the apple, and had been overgrown, leaving a distinct seam. Many consider it first-rate; but I do not, I never found it more than second, and sometimes only third-rate. Size medium to large, color green, flesh juicy, sub-acid, and of quite a green cast, fruit always perfect, tree very vigorous and productive; season December to April. It is here known as West's Spitzenberg, Honemacker Pippin, Haymaker, etc., etc., and by the old German farmers of this section, Hommacher Apfel. I can not trace its origin—all I can learn is,

that a man of the name of Hommacher, raised it; yet where this person lives, or did live, I can not ascertain.

14. *Fallen-walder* [Fallawater, Talpehocken].—One of the largest and most prolific, showy market apples we now have; although but second-rate in flavor, it is well worthy of culture. This apple, which really originated in Bucks county, on the border of a fallen forest, (hence its name,) is stated by an eminent pomologist to be of medium size, and to have originated at Columbia, in this state, which is erroneous.

15. *White Catlin*.—Originated, I believe, in Baltimore county, Maryland; it is an apple, which with them is evidently as fine an early winter or late fall table apple as can possibly be produced. Size small, color pure white, form oblong, flesh tender, breaking, *and abounding with a rich, pleasant, sub-acid juice*. Tree a fine grower and great bearer, fruit always perfect.

16. *Shipley Green*.—Origin so far as ascertained, Frederick county, Maryland. A medium sized, oblong, red and rusty winter apple, sour to excess, yet it has its friends; and perhaps when we consider that it will keep as long as wished, and when fully mellow, can be eaten with some satisfaction, and that it will bake quite well, and consider the perfect growth of the tree and its great bearing qualities, it may still find a place among the long keepers.

17. *Herman*.—Originated on the farm of Mr. Herman, of Silver Spring township, Cumberland county. Size medium, form oblong, color fine, red striped, on green ground. Tree a fair grower and very prolific, producing uniform fruit, always perfect. Flesh rather greenish, tender, juicy, and of high flavor. By some it is considered first-rate, but I do not so estimate it; yet I think it deserving of wider dissemination. Season, December to April.

18. *Autumn Romanite*.—Originated on the farm of Jacob Nicely, Cumberland county. Size medium, form round, somewhat flattened, color a beautiful red, flesh yellow, very pleasant, but not quite first-rate; tree very prolific; season, September; hence I do not think it is likely to become a general favorite.

19. *Red Favorite*.—A fine red flat apple, of medium size, and such a pleasant juicy sub-acid flavor as to gain general favor, but

it ripens at the same time as Catlin, Better than Good, Rambo, etc. I do not think it any better, and it is not quite so uniform in its growth. I consequently can not suppose it will be much more widely disseminated. Origin on my father's farm.

20. *Mifflin King*.—Originated on the farm of Mr. Koffman, of Kishacoquillis Valley, Mifflin county. From the flavor, appearance of the tree, etc., it is evidently a seedling of the Rambo, but ripens a little earlier; is not quite so large, oblong in form, and to my judgment, a better and more pleasant apple than its parent. I do not know of its being tested out of its original section, my trees not yet being of a fruiting age. Size small, color of the Rambo, perhaps rather more red, fruit oblong, flesh remarkably tender, juicy and pleasant—first-rate. I will venture this, and stand the criticism of others who have eaten it. Season, October to December.

21. *Gully Apple*.—A highly boasted apple, which originated in a field of Mr. Millner, of Lancaster county, by the side of a deep gully; hence its name. I have lost the description given me. This season I had a few apples, but so imperfect that I can not give the form. Size small to medium, color white, with fine blush, flesh juicy and white. I have no doubt it will prove a good apple. Season, August.

22. *Fronclin*.—The original tree is yet standing in Lampeter township, Lancaster county, Pennsylvania; known to be over one hundred years old, and a few years ago was yet sound, and in full bearing. About six years ago I cultivated it for sale, but considered it rather acid for a September apple, and stopped its culture; for the last few years I find the young trees planted, bending with the perfect crop, until the whole tree is made conspicuous by the red beauties. I believe I have never yet seen an imperfect apple of this kind. Size medium, form regular, round, color a pure bright red, flesh yellowish, rather acid until fully ripe, but of a rich vinous flavor, fruit always perfect, smooth and fair, trees very prolific, even when young, as well as a rapid and fine grower. Season, September.

23. *Goodyear's Seedling*.—Original tree stands at the door of a gentleman of this name, and produces heavy crops of a fine, perfect growing apple, of medium size, fine



red color, firm, juicy flesh, of second-rate flavor, but will keep until April, which is a good quality, and in this section it is much esteemed. Perhaps it combines as many good qualities as some others. The tree is one of the finest growers now under cultivation. It has not yet been fully tested from its original position.

**CHERRIES.**—Triumph of Cumberland.—About thirty years ago, or probably longer, (the originator is not living,) Henry Lechler raised from some choice seeds a few young cherry-trees, which he gave to Mr. Stiles, who owned a country-seat near Carlisle; Mr. S. carefully reared the trees, and afterward sold the property to the county of Cumberland for an almshouse. These trees still exist, and in the garden now stands the original stock of this great and noted cherry. It is disseminated throughout this county under the names of Monstrous May, Breneman's May, Steret's May, etc., etc., and some years ago, it was named by a nurseryman, Cumberland Seedling; but as he saw we were in an age of humbug, and felt a disposition to move with the age, he paid it a higher compliment by calling it Triumph of Cumberland, under which name I shall recognize it hereafter, as it has been most disseminated with this cognomen.

DAVID MILLER, JR.

DOWNINGTOWN, CHESTER CO.,  
September 13th, 1852 }

Having returned from a short pomological tour through this and the adjoining county of Lancaster, it becomes my pleasant duty to fulfill my promise.

Armed with a basket of the best Dearborn's Seedling and Bartletts, I was ready for a comparison, whenever that oft-repeated expression, "I have one of the best pears," was heard. But one man was found who did not acknowledge, after tasting these, that his were inferior to one or the other.—You will at once infer from this, that to find pears in this section, as well perhaps as elsewhere, better than those mentioned, in their season, is extremely difficult. Even he who contended that his was "the best ever grown," had one much inferior, in my estimation. It was no doubt, from its appearance, growth of tree, and wood, identical with the Schenck's. Specimens of both will be at the congress.

More than a dozen varieties of reputable pears, several of peaches, and plums innumerable, were examined. Nothing found better than Bartlett, Hains' Early Red, and Green Gage.

It may be of some interest to you to know the estimate of varieties fruited here. The Meynard pear, ripening early in July, is good, but its fine size, fruitfulness, and earliness make it worthy of culture. Madeleine very good. Beurre Giffard, fruited by Thomas Harvey, best. Should this continue to prove so fine in quality, its good size and beautiful appearance will give it the highest rank among July pears. Amire Joannet, fruited by Dr. Thomas, good. Julienne, variable; this season only good.—Skinless, good. Bloodgood and Dearborn's Seedling, best. Belle of Brussels, if eaten at the right time, good. Summer Franc Real, very good. Stevens' Genesee, now ripening, very good. Bartlett, best—its fine size, delicious perfumed flavor, rapid, vigorous, symmetrical growth, early and prolific bearing, make it the *ne plus ultra* of pears in its season. Lodge, now ripening, good. St. Ghislain, best—many prefer it to Bartlett. I do. J. K. ESHLEMAN.

MAHLON MOON, of Bucks county, remarks in a communication to the late president on the subject of apples, that the Ridge or Ridged Pippin (probably so called from its uneven surface) is extensively cultivated in that county, is of third quality, appreciated only in seasons of scarcity; its chief merit consists in the productiveness of the tree.—Its origin is not known, possibly a native of that section.

Knowles' Early is a small apple of second or third quality, ripening with Prince's Early Harvest; tree productive every season. In 1851 it failed for the first time with him.

The Maiden's Blush does well and is a good market fruit.

Long Island Russet is an enormous bearer, and a late keeping variety, on which account it is profitable.

Roman Stem is unquestionably a very valuable variety for Pennsylvania; is very productive, and larger and finer even than in its native soil.

Smoke-house succeeds well in this section. Smith's Cider, is fair and productive.

The following are well suited to our soil!

and climate, viz: Early Harvest, Early Strawberry, Summer Rose, American Golden Russet (Sheepnose) Fallenwalder, Fall Pippin, Townsend, Wine Sap, Jersey Greening (Winter Bellefleur, Greasy Pippin, Hollow-core Pippin, or our White Bellefleur) and Kaighn's Spitzenberg. The last is large and productive.

The fruits of the immediate vicinity of Philadelphia being fully reported upon at the former sessions of the congress, need no comment on this occasion, and thus terminates the report from Pennsylvania.

THOMAS P. JAMES.

September 13th, 1852.

#### Diana Grape.

On the 15th October, ult., grapes were exhibited at one of the beautiful shows of the Pennsylvania Horticultural Society, that had been forwarded by the Hon. B. V. French, of Braintree, Massachusetts. They consisted of Catawba, Isabella and *Diana*. When they were tested, the latter variety was declared by the committee to be *much superior to the Catawba!*

This only proves that there will be a difference in tastes, and that the *Diana* is better adapted to the neighborhood of Boston than the *Catawba*. Here the experience of one season is adverse to any such decision.

#### Pruning.

VARIOUS opinions are entertained upon this subject by different pomologists and arboriculturists. The following, from the *New England Farmer*, is given as one authority in favor of fall pruning; to which, however, I have not felt prepared to accede, as my observations have led me to prefer cutting limbs when the cambium was in full flow. Trimming up young nursery trees is a very bad practice.

Few of the duties of the farm are so badly performed as that of pruning—bad in the manner in which it is done, and in the season of the year usually selected for the operation. Trees are living, sentient things, and must be treated as such. Their young bark is as vulnerable to hobnail boots as the back of the hand, and as easily mutilated by a dull saw or knife. No skillful surgeon

will amputate a limb with dull instruments, or leave the bleeding wound exposed to the air; but many farmers who have pruned for forty years, and think they "know a thing or two" about it, do both. They have seen the tree put on its green livery in spring, blossom, perfect its fruit, and increase in stature, and when it had performed its labors for the season, throw off the foliage which it no longer needed, and spread its broad limbs resistless to the winter winds. Thus they have seen it live, and breathe, and grow, and yet never seem to have appreciated it as a living friend, inviting them to its shade, regaling them with its fruits, and almost speaking in accents of affection.

Away with the ax, the coarse saw, and all dull tools about your trees, and in their places use those of the best make, and with edge as keen as Damascus blade.

Every wound that is made *should be covered*. If the tree is vigorous, and the place small, it will probably grow over; but covering greatly aids the effort of the tree in perfecting its outer garment. Paint, clay, gum-shellac, and waxed cloth, are used for this purpose; the shellac and cloth are certainly excellent. The shellac is dissolved in alcohol, and applied with a brush. The cloth is spread with grafting wax made rather soft, and applied with a brush while warm. A strip of this tied round a wound, or a patch stuck on over it, will greatly facilitate the healing process.

Ninety orchards out of every hundred are mutilated and injured in being trimmed. Limbs that ought to be cut off are preserved, and those that ought to be retained are taken away. Some are sawed partly off, and allowed to drop, tearing away the wood and bark from the under side, and leaving a ragged and ghastly wound, that never heals, but brings premature decay. This is strong language, we are aware, but a careful inspection of most old orchards will confirm it.

There is need of but very little pruning where an orchard has been properly managed from the start. No large limbs will ever need to be taken away, unless broken by winds or injured in some other way. *Prune but little*, is a good motto. Suffer the shoots which start out on young trees to remain till autumn, when they have shed their leaves. The tree needs them, and

nature, ever ready with her helping hand, sends them out to aid the leaves of the top in elaborating the sap and increasing the whole growth of the tree. We find in an exchange a case in point, which we give as confirmatory of our theory. A correspondent of the *Prairie Farmer*, published at Chicago, Illinois, states that he pruned young apple-trees four to six feet high, early in spring, and then kept the shoots rubbed-off the lower parts of the stems, leaving only suitable heads, on one-half the trees. The others were left with the shoots untouched from top to bottom. The result was, that those which received no summer pruning were twenty-five to forty per cent. larger than the others, even after they were pruned up to heads the following spring. So it may be noticed in older trees, that when most of the limbs are cut off in the process of grafting, large numbers of suckers are thrown out, and we believe for the same purpose that shoots are on young trees—to keep up a proper circulation and balance in its powers.

As to the best time for pruning apple-trees, we have no doubt. From personal experiments made for several years, from reliable books, conversations with practical men, and a pretty extensive examination of orchards, we are fully of the opinion that the autumn, after the leaves have fallen, is the most proper time. Where we have carefully pruned at this season, it has never been followed by a flowing of the sap and that discoloration of the bark which follow spring pruning. The wounds either heal over or become so dry and hard as to prevent decay, and the tree seems to sustain no check or injury whatever.

The head of the tree should be kept open to the air and light, and free from limbs crossing and rubbing against each other. Cut out these and the occasional dead limbs which may be found, and the orchard which has been well managed will need little more in the way of PRUNING.

#### Labels.

DR. WARDER:—I beg leave to call your attention to the present practice of labeling trees and plants in the nurseries. For instance, the trees are taken up, and some-

times even while the ground is wet and muddy, then a piece of shingle is split and shaved smooth, and without its being painted, the name of the tree is written upon it with a pencil; thus, before the order is filled and the trees packed, the names are often obliterated, to the no small disappointment of both the purchaser and his gardener, who have to wait five years or more before they see the fruit, to know its name and quality, and perhaps they may never discover its true name, if it be a new sort or one that they have never seen.

This should not be. To avoid it, I should recommend that the labels be substantial and numbered with a tenon saw, and that a corresponding list of the names and numbers be made out and sent with the order. The labels may be easily made from a piece of inch pine board, sawed to the proper length, split, shaved and wired, and kept in readiness for orders. They can be numbered with the saw up to forty-nine, and will last for years if you attend to loosening the wires occasionally as the tree grows.

It will be advisable to copy the list of names and numbers into the end of a gardener's journal, such as is kept by some gardeners to record their "*rough notes*," and such as I would urgently recommend every brother of the craft to keep, especially my younger brethren, who apprentice themselves during their natural lives, or as long as health lasts, to that ennobling profession of horticulture, which is the oldest business in the world. Again I repeat it, keep a journal; it will only cost you a few moments every night, the effort itself teaching you a good lesson of system and regularity. And then if you ever change your residence to other lands and different climes, you can look back with pleasure and advantage to many an item in your journal

of "rough notes by the way." Respect-  
fully, Wm. EVANS.

WALNUT HILL, Ky., Dec. 16, 1852.

REMARKS.—The careless manner in which some persons attempt or pretend to discharge this important function of the nurseryman—the labeling of his trees after sale—is certainly open to animadversion by the purchaser, as the loss of a label is a serious matter to him who enters upon the cultivation of fruits, whether as an orchardist or as a mere amateur. To all who wish to retain their labels, I should recommend replacing them with permanent markers of whatever kind: I prefer the zinc strips. But this is not all that is required. A diagram of the orchard should be made, with the number, or a number written at every point corresponding to the location of a tree, and a list of the names on another page, with a column of the numbers opposite each. This forms a convenient and durable reference. Besides it is not always advisable to let all straggling visitors know what fruits you possess; for it has happened that such a one has cut all the grafts from a young tree of a new sort, and then taken the label for the sake of preserving the name with the scion, though too often leaving the rightful owner ignorant of the kind which has been robbed.—Ed.

#### Tan-bark, again.

DR. WARDER :—I expect you will throw this under the table, in perfect disgust at the heading; but really I am surprised at the diversity of opinion which exists with regard to the utility of tan-bark as a mulching for strawberries; for my part, I think it decidedly the *best* thing that can *possibly* be used for covering strawberry beds.

Independent of its qualities as a special manure, it has several other virtues, which render it of immense value. When has

there been a season that the strawberry crop has not suffered from drought? It has been so long since such an one occurred that I have quite forgotten it. Well, can any one name a material so cleanly, so convenient, and so cheap, already ground to your hand? (I mean spent tan, such as you get from the tanneries—no one uses any other.) It is superior to chaff for two reasons: First, because it keeps down weeds, and retains the moisture in the ground—and chaff always has more or less grains and grass seeds remaining in it, which invariably make their appearance in the beds. Tan keeps the fruit cleaner than sawdust, or mud either; for if you keep your beds perfectly clear of white clover, blue grass, etc., and cultivate in stools, (the only proper way,) they will invariably be muddy, if left without mulching. If the fruit does get a little fine bark dust on it, this may easily be blown off; but dirt can not be removed without washing, and that spoils the flavor entirely. The last, and not the least quality which tan-bark possesses, is the protection it affords to the roots in the winter, preventing the frost from drawing the plants out of the ground, which is a frequent accident, particularly to young runners.

I was really astonished and delighted at the growth and vigor of Neck Pines this season; for, after planting as many of the first runners around the parent plant as would make a good stool, (say four,) I began destroying them, and, really they tired me out, for I had to cut them every few days until the first frost, when I thought my labors were ended, and neglected looking after them for two or three weeks; but imagine my astonishment when, upon looking at my bed a short time since, I found it completely covered over with runners—all of which I attribute to the beneficial agency of tan-bark, the soil being nothing extra—

an old raspberry bed, with a little stable manure simply spaded in before setting the plants in May.

T. V. P.

#### Deep Planting of Trees.

MR. MARSHALL P. WILDER, of Dorchester, Massachusetts, has the following communication in a late number of the *New England Farmer*:

I cheerfully respond to the request of your correspondent, H. F. H., in relation to deep planting. I concur fully in his maxim, "better too shallow than too deep," and also agree with him that more young trees are killed from too deep planting than from any other cause.

With the quince, the willow, and all trees, in fact, which root readily from cuttings or layers, the dangerous results of deep planting are obviated, from the fact that, however deeply planted, these emit roots nearly up to the surface of the soil, where their food is assimilated to their wants by light, heat, and atmospheric influences.

Pear-trees, therefore, which are grafted on the quince, and are planted "deep enough to bury the quince stock entirely below the surface of the ground," will not be considered as deeply planted, when it is remembered that, under good cultivation, the quince will furnish itself with new roots up to its junction with the pear.

In the discussion to which your correspondent alludes, I could not of course enter into all the details of cultivation, without transcending the limits allowed to any one speaker. I, however, took it for granted that a common sense view of the subject would lead the practical man to the conclusion that the pear should be grafted as near the quince root as possible; and we would by no means recommend the selection of trees which are worked "six or eight inches" above the quince root. When it has been our misfortune to receive from Europe dwarf trees grafted thus high, we have uniformly planted the whole quince stock under ground. But to counteract the deleterious effects of too deep planting, we have transplanted the trees, at the same time removing the long shank with the lower and now inactive roots.

The principal advantages of the system we have adopted are, that the quince stock,

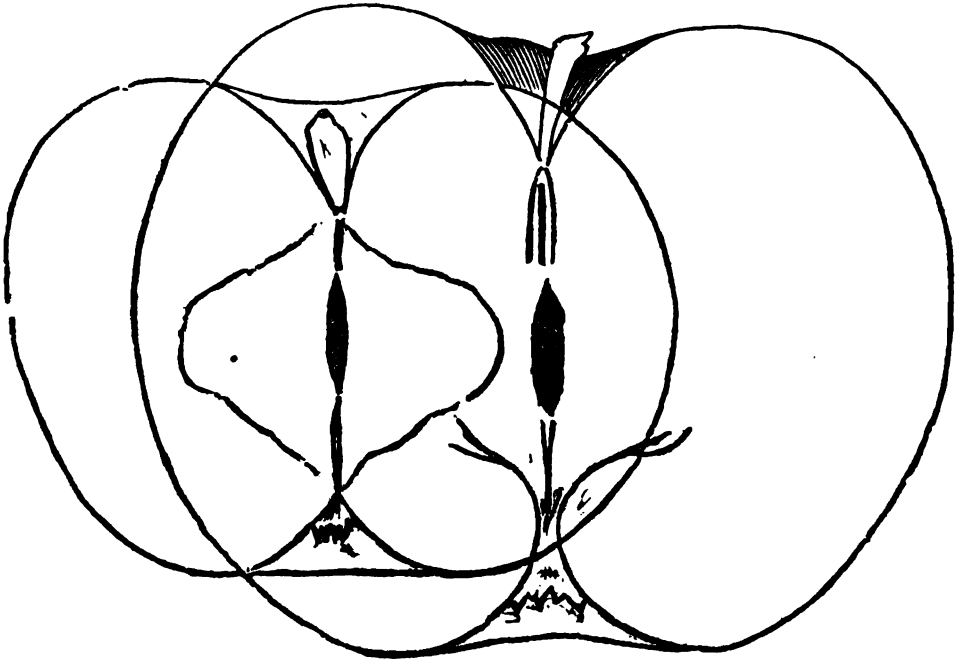
which is naturally hard and rigid, becomes moist and emollient when covered entirely in the soil, thus allowing it to swell up evenly and progress symmetrically with the pear stock. In this way it is also protected from the depredations of the borer; and when the variety is well adapted, the pear stock frequently sends forth roots, thus securing the double advantage of early bearing and increased health and vigor in after years.

#### The Cooper Apple.

DR. WARDER:—I was sorry not to see you at the State Fair; where I spent most of the time in observing the fruits, of which there was certainly a much better show than at Columbus. I saw one plate of apples, marked "for a name," which very strongly resembled those which we exhibited at the fair last year. Another plate marked *Cooper*, appeared to be the same fruit, but as I did not taste either, I can not be sure of their identity. My fruit may be the Cooper, but if that fruit be as good an apple as this, why is it not more generally known and extensively cultivated.

I have no selfish interest in bringing this apple into notice; since I knew any of this variety, I believed it to be an original graft [sort?] So far as I am acquainted with the taste and properties of apples, this, in my judgment, is unrivaled. True, my knowledge of fruits is very limited, but I have eaten most of those which are ranked first in horticultural advertisements. As I have said, it is not for myself, but that others might know such a fruit, and have the pleasure of eating it, that I have ventured to write upon the subject.

*Description.*—The tree is of vigorous growth; the leaves upon an upright shoot, are often three to three and a half inches broad, and four or five or even six inches in length; shoots stout, being often nearly as large as your little finger at the end of



COOPER APPLE.

the summer's growth. The form of the tree is peculiar, and its appearance beautiful; if there were a dozen scattered promiscuously through a large orchard, you would have to be shown but one specimen to recognize all the rest.

It comes into bearing, I think, as early as most large kinds, and never fails to bear well, except when killed by the frost. The fruit is uniformly fair, and seldom rots or is otherwise affected except by birds and insects, who appear to appreciate its merits. In more than twenty years' acquaintance with it, I do not remember ever seeing one water-cored, or otherwise sickly. They cook well from the beginning of July, and will mellow without wilting, if picked in the early part of August, though little more than half grown. Their color is a beautiful pale green, striped with red where ex-

posed to the sun, during the last of August and through September. The skin is thin, smooth, glossy and transparent; the flesh is juicy and brittle, often flying open like a water-melon when falling on anything hard, and this long before they are fully grown. In ordinary seasons they begin to ripen in September, though if carefully picked and put away, they will keep pretty well until March; they are at their best, however, from the middle of September until Christmas.

WM. F. ENGLISH.

ST. JOHN'S VICINITY, Anglaise Co., O.

#### REMARKS.

At the Ohio Pomological convention of 1847, the *Cooper apple* was presented by Messrs. Springer, Weeks and S. Wood. The former said it was one of the very best of fall apples. The specimens eaten made a favorable impression upon all who

tasted it. Mr. Elliot thought it would not rank with the Fall Pippin and Porter.

The following remarks were presented in a letter from Dr. Barker, of McConnellsville:—"This is another of the apples embraced in the original list of scions sent by Israel Putnam to Wm. R. Putnam, of Marietta, in 1796. It has been half a century traveling one hundred miles up the Muskingum valley and developing its superior qualities. It is common in this vicinity, but matures too rapidly to be much sought after by those acquainted with it."

I have it from the best authority that Mr. Israel Putnam procured the scions sent by him from Judge Cooper, of —, New Jersey: hence the name, and hence I infer that it is or has been cultivated in New Jersey

under some other name. Who can inform us?

At the next convention, 1848, it was also presented by Erastus Bowe, of Fort Ball, Seneca county. It has occasionally made its appearance upon the tables of the Cincinnati Horticultural Society, generally from F. G. Carey, of College Hill, and is seen annually in the market, but almost exclusively in the wagon of Mr. Herron, from the Whitewater valley, Franklin county, Indiana; and now, as the above letter sets forth, from Auglaize county, Ohio.

In the report of the North-western Fruit-Growers' Convention, held at Dixon, Illinois, the *Cooper* also appears in the list of fruits exhibited.—Ed.

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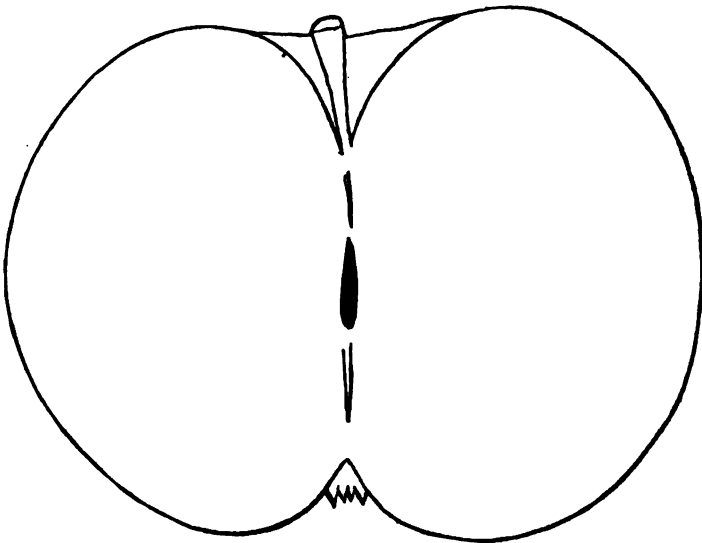
MYERS' NONPAREIL.

DR. WARDER:—

I received your note some days ago, and not being able to go to Columbus, I will try and send you some grafts. I send you specimens of the fruit.

*History.*—The apple had its origin near Massillon, in this state. The tree is one of the best of growers, being straight, stout and compact, forming a top in such a manner as never to break down with a crop. It has been bearing

on this place for twenty years, and in that time has proved to be a good and regular



MYERS' NONPAREIL.

bearer—that is, it bears a crop of apples almost uniformly of one size, nearly every

year. It is more productive than the Rambo, Pennock, and most other kinds.

*Description.*—The fruit may be termed a red apple mixed with yellow, making it one of the most handsome apples we have. An average specimen will measure about ten inches in circumference. In quality it is the best, and to any man who may produce me an apple of its season (which is from the first of September to the first of December) better in all respects than this, I will give five hundred apple-trees, at his own selection, from my nursery.

I have several other seedlings, raised in this county, which I think of rare merit.—Among them are the Blue Rambo and Sweet Rambo, being seedlings from the common Rambo, Culp's Red, Bellefleur, and others.

*REMARKS.*—The above description was very kindly furnished, with a few grafts, in reply to a letter of inquiry directed to the writer, an extensive nurseryman in Columbiana county, Ohio. Having seen and tasted the fruit once, the impression upon the palate was such as to induce further inquiry. From my notes taken at the time, the apple was examined by the fruit committee of the Cincinnati Horticultural Society, it appears that the tables were then well covered with specimens of the finest varieties—the Fall Wine, Fall Pippin, Rambo, Hawley, and other first-rate fruits. Opposite to the outline of the latter, Hawley, I find a note to this effect: *The best apple of the season*; on the same page, beside the "Nonpareil," is entered "Better than the best," which I believe was the united testimony of the whole committee.

It is remarkable that this variety should not have been more widely disseminated, except that we have observed the same thing in the history of many other choice fruits. But the modern progressive idea of Fairs, Pomological Societies and Congresses,

brings together those interested in fruits, with their specimens, to the mutual improvement and advantage of all, resulting in the diffusion of the best varieties and the exclusion or rejection of the worst; by which, not only the parties expending their time and their energies are benefited, but every member of the community also. I am so anxious to extend a knowledge of a very good variety, that this imperfect sketch and an outline are presented to the reader, rather than wait until I may have had further opportunity for its examination. In the meantime, all inclined to investigate for themselves are referred to Mr. Myers, as above, for trees.—Ed.

#### Large Romanite, of Kentucky.

*DR. WARDER:*—Do you know the apple called in Kentucky the Large Romanite? I have not been able to find it by that name in any of the books. Also the Blackburn? The latter is a fall apple, large and superior; it grows upright and vigorous. The former is of very vigorous growth; the fruit very large and rather coarse, but admired by some. Can you or some of your correspondents say whether these are merely local synonyms, or local fruits. If you do not know them, I will send you specimens of the Romanite. The Blackburn, I think is out of season. But if not known with you, it deserves to be, and should we live I will send you specimens next fall.

*REMARKS.*—I suppose what you call *Large Romanite*, is the same fruit often called Big Romanite, which is the Pennock's Red Winter of the books; a large coarse winter apple, of second quality; a thrifty tree and good bearer. The fruit keeps well when not affected with the bitter speck at the surface, which is a very common fault in many places. It can only be recommended as a cooking apple. Although, in the present



state of public taste, and lack of correct information respecting the quality of fruits, it sells well, I should not advise any one to plant this variety, because we confidently trust that the next generation will have more correct tastes.

The Blackburn apple is not recognized from your very brief mention of it, nor is the name familiar. The specimens have not arrived, but shall be welcomed and further noticed on receipt.



## The Garden.

### MANAGEMENT OF ORCHIDACEOUS PLANTS.

ORCHIDS are a class of plants which are among the loveliest productions that Flora has furnished us. When we look upon some of these beautiful genera from the East Indies—such as the *Dendrobiums*, *Vandas*, *Saccolabiums*, *Sarcanthus*, and *Phalænopsis amabile* or Indian Butterfly plant—we shall all agree to this proposition. And then turn to the Western natives—such as the *Cattleyas*, *Lolias*, *Angulonas*, *Leptotes*, *Stanhopeas*, some of the *Oncidiums* and *Catasetums*; and one or two from Western Africa, as the *Angreacums*, and *Ansellia africana*. On the latter I have seen thirteen panicles of flowers open at one time, and on each panicle from forty to fifty large blooms. We feel bound to say that they are beautiful.

Orchidaceous plants are found scattered over various parts of the temperate and tropical regions. In the former they are found growing in the ground, and in the latter on the stems and branches of trees in shady, damp forests. These plants require to have a season of growth, a season of rest, and a season of flowering—all of which

should agree as much as possible to the corresponding seasons of those parts of the globe to which they belong. Now in India there are three seasons: the hot or dry season, which is succeeded by the rainy season, and the cold or winter season. In the hot season these plants produce their flowers, in the rainy season they make their shoots, and in the cold season they are in a state of rest; so that the different periods being known, it is easy to imitate them in our stoves.

All the *Vandas*, *Arides*, *Saccolabiums*, *Octomerias*, *Larcanthus*, some of the *Oncidiums*, *Phalænopsis*, some *Dendrobiums*, *Dendrochilums*, *Lepanthis*, *Schomburghias*, *Cyrtochylums*, *Cirrhopetalums*, *Masdevallia*, and some others, do well on pieces of oak wood. Commence by sawing a piece of wood the size wanted, place upon it the plant, spreading out the roots, and lay upon them a little decayed sphagnum moss, just sufficient to keep the roots from being cut by the wire which, with some tacks, make it fast to the block.

Some of the *Dendrobiums*, *Leptotes*, all

the Stanhopeas, Acinetas, Angulonas, some of the Epidendrons, Brassias, Batemanias, Camarotis, Fernandezias, and others, do well in rustic baskets, with moss placed about the roots, and suspended to the rafters of the house.

Others—as the Lolas, Cattleyas, Cymbidiums, Lycastes, Maxilarias, Tricopilias, some Dendrobiums, Catasetum, Tygopetalums, Lobralias, and a great many others—do well in pots or flat pans, furnished with a three inch pot inverted over the hole, filled up all round with broken pieces of pot, over which should be placed a quantity of fibrous peat and moss broken in pieces the size of a walnut, then some decayed leaves so placed as to leave a passage for the escape of water; to do this more effectually introduce some pieces of broken pots between every layer. Continue this process to six inches above the rim of the pot, fasten it down by means of pegs about six inches long, and upon this place the plant, let the roots be carefully laid out and covered up to the pseudo bulbs with the pieces of peat and sphagnum moss, fasten the peat and moss as before described until the whole is finished.

All the East Indian plants like a strong, moist heat during the growing season, which should commence about the beginning of June and continue to the end of September, from which time they should be kept cool and dry until the beginning of March.—They should then be placed in a strong, dry heat to induce them to flower. Treated in this manner they bloom profusely, whereas if they are kept continually in a moist atmosphere they do nothing but grow, and of course produce little or no flowers, because they are not allowed a proper season to perfect their flower buds. Those from the vicinity of Guatemala and Mexico require the coolest part of the house.

Let the temperature range from eighty to

eighty-five degrees by day, during the growing season, and from sixty-five to seventy degrees by night, and in fine sunny days admit a little air by the top lights, watering down the house previously. In syringing, care should be taken not to wet the flowers, nor to let the water get into the young buds, as it has a tendency to cause them to rot, especially the Cattleyas and Stanhopeas.

The kind of house that I should recommend for the growing of Orchids in, is a neat little span-roofed structure, say ten feet high, thirty feet long by fifteen wide, facing to east and west, heated on the hot water system, allowing the pipes to run round the house parallel to the outside wall, with a hot water chamber along the center. Allowing the house to be fifteen feet wide, there would be a table two feet wide round the house, the walk two and a half feet wide, and the water tank six feet wide, allowing it to be flat on the top so as to form a table; this I should cover with coal ashes, tan-bark, or leaves; the latter I should recommend.—This being done, I should commence by placing all the largest plants that are in pots on the center table, stuffing a quantity of moss between the pots up to the rim, and by keeping this tolerably moist from the rose of a watering-pot, would create a nice, humid atmosphere among the plants, which is the very thing that they delight in.

Place then all the small plants in pots on the side table, stuffing them with moss in the same way.

All the plants on pieces of wood, and that are in baskets, suspend to the rafters in such a manner that they deprive the others of as little light as possible. It is an important thing, I always think, to allow them plenty of light, without exposing them to the rays of the sun, so that even when shading is used it should be of such a material as will admit a tolerable degree of light. I always

found very thin canvas to answer the purpose remarkably well.

There are a few other plants that do remarkably well in the orchidaceous house—as the Achimenes, Gloxinias, all the Aschy-nanthus, Solandras, and some few others.

THOMAS HUTCHINSON,  
*Reading Road Nursery.*

#### Spinach, or Spinage.

THE Spinach or Spinage has long been cultivated, and is said to have come originally from Western Asia. Buist says it is a native of Spain, while Bridgeman supposes it to be a native of a cold climate, because he finds it hardy in northern latitudes. We believe, however, that Western Asia is the place of its nativity. It is a hardy annual, and has many valuable properties, and when eaten freely it is a laxative, and consequently is often prescribed by physicians, when other vegetables are denied. It requires boiling for ten minutes in a very small portion of water containing salt. The scum should be cleared off as fast as it rises, and then serve up after proper drainage on a colander, season it with butter and pepper, or dress with eggs and vinegar. Prickly seeded or winter spinage is preferred for sowing in September, for winter crops. The round seeded for spring sowing, produces a rounder flower and more fleshy leaf, and is preferred in mild latitudes. Flanders Spinach is a prickly seeded variety, with great breadth of foliage, is greener, and of more luxuriant growth. We find these kinds under various names, thus: Large round leaved, broad leaved Savoy, Holland or Lamb's-quarter, and the New Zealand, which differs widely from the other kinds.

Spinach requires a very rich soil, and will not pay in any other. As it is the only vegetable that can be raised with advantage in the latter part of the year, we may use such soils as have produced summer crops, and if highly manured for this crop it will be in good condition for beets, carrots, etc., in the spring. Seeds should be sown from the first to the latter end of September, so as to have a succession. They may be covered with straw to protect them from the winter, and they will be ready for pulling in early spring.

Spinach seed sown in rich ground, in March or April, will grow freely, but if not cut before the approach of hot weather will run to seed. It should be sown in drills and frequently hoed, which will prevent its running to seed at so early a date. For both early and late spinach, sow in drills one-quarter of an inch deep, and nine inches from row to row. Some gardeners, for summer crops, sow from the end of March to the middle of May. It is entirely useless to attempt its cultivation without full manuring, being a rank grower and gross feeder. The vicinity of trees or buildings should be avoided, nor will it grow in light ground without being rolled. Spring crops are often raised between peas. The seeds usually require about ten days to germinate. They should be thinned-out, when too thick, and if they have leaves an inch broad, they may be used until the main crop is sufficiently thinned. When two or three inches broad, the whole crop is fit for gathering. It should be done by cropping the outer leaves, leaving the heart and root to shoot out again. Buist says he has seen the leaves of the round and Flanders Spinage two feet in circumference. It is usually slightly mulched with straw to prevent its being thrown out during winter, and if a portion be protected by mats, removed occasionally in mild weather, part of the crop may be taken off during winter months. The plants must never be permitted to touch each other, or they will be sure to grow up spindly and run to seed. If cultivated in drills a foot apart, seven or eight pounds will plant an acre. Bridgeman says:

"Be careful to pick Spinach exceedingly clean, and wash it in five or six waters previous to cooking it. Some cook Spinach in a steamer over boiling water, others boil it in water; but the best way is to put it into a saucepan that will just hold it, without water, then strew a little salt upon it, and cover it close. Put your saucepan on a clear quick fire; and when you find the Spinach shrunk and fallen to the bottom, and the juice which comes from it boil up, it is done. In order that it may be rendered capable of absorbing a moderate quantity of gravy, melted butter, etc., which are indispensable with green vegetables, let it be well drained in a sieve, or colander, before it is dished.

"The New Zealand Spinach, or *Tetragona expansa*, is not much cultivated in this country; its nature seems to be opposite to the common Spinach, as it will endure the heat better than the cold. It may be obtained in the summer, by planting the seed in April and May. Being of luxuriant growth, it should be planted in hills three feet apart, and about two seed in a hill. The leaves will be fit for use during the summer, and until late in the autumn."

To obtain seed, the sowing of each variety should be made in February or March. Of the round leaved variety, some plants of the regular crop may be allowed to run up in April or May, and of the triangular leaved variety some plants of the winter standing crops may be suffered to remain. They should be kept clear of weeds. Landreth says:

"Spinach is dioecious, and many ignorant persons, perceiving some of the plants to have no appearance of bearing seed, advise these to be pulled up, but these are the male-bearing plants, without which the others would be unfruitful. If, however, they are very numerous, some of them may be removed with benefit to those that remain, care being taken that some are left in every part of the bed. When the seed is set, the male plants may be entirely removed, which allows more room for the fruitful. When the seed is ripe, which is known by its beginning to shed, in July or August the plants ought to be pulled up and laid to dry thoroughly on a cloth, previous to its being beaten out and stored."—*Working Farmer*.

#### Salads.

**MUSTARD, RAPE AND CRESS.**—Mr. Chapman, of Vauxhall, is a large grower of these; he sows a house of them every-other day. The price of rape is only about a shilling a bushel, which is cheaper than mustard.—When young the rape plant is more hardy and less liable to damp than mustard; it is also smooth in the stem, and much whiter. Rape is not quite so hot in the mouth as mustard. Sometimes when the growers run out of rape seeds they are obliged to employ mustard, but of this the green-grocers soon complain, their customers telling them that it was not mustard at all which they sold them; showing that the London people pre-

fer rape to mustard. Both are sown on old tan, made smooth and level on the floors of vineries and other empty houses. The tan is well watered, and nothing whatever is put upon the seeds except a mat, which is merely to keep them moist. They soon vegetate, and when the plants are about two inches high, the mats are removed during the day to make the seed leaves beautifully green; but they are put on at night to hasten growth. When about four or five inches high the crop is cut, each handful being at once put into a punnett two inches deep and five inches or so in diameter. It is sold cheap and is in good request, being considered a fine purifier of the blood, as well as an ornament among other salads.

Cress is sown and treated as the above; but it requires to be kept moist and more excluded from the air, on account of its being a smaller seed with much less water in it than mustard or rape.

**AMERICAN CRESS.**—This is much admired by many as a breakfast salad, the young center leaves only being used; it requires sowing once a fortnight during the spring, as it soon runs to seed, and twice or thrice in autumn for winter supply. Where there is much demand for it, I see no reason why it should not be sown thick, and cut off like mustard. The seeds are cheap enough.—Frames can easily be put over it during winter, or a covering of straw would make it always accessible in the season when too many food ingredients cannot possibly be produced.

**CORN SALAD, OR LAMB LETTUCE.**—This humble but excellent herb is scarcely known in the London markets. It forms a good ingredient in a salad, and it is a powerful purifier of the blood. Being a native of Britain, it is very hardy; and if sown in July, August, and September, a good succession of it will be kept up during winter. Frames might be filled with it late in autumn, or it might be covered with straw in the open ground in case of frost or snow. These would keep off the weather, and render it more easy to get at. Sow it in beds or rows, thin out to about five or six inches apart. I have never blanched it, but I see no reason why it should not blanch. All those herbs must be asked for before they become common.—A demand must be created for them. Market gardeners will not grow what they can not sell; or they would break down, as I did

twelve years ago, with the most valuable of winter salads, blanched chicory leaves.—*James Cuthill, in Gard. Chronicle.*

#### *Amherstia Nobilis.*

N. Ord. *Leguminosæ*.—A native of the Birman country.

THE first specimen of this splendid plant, as we stated in our last number, had been imported by F. Lenning Esq., of Philadelphia, and is in a flourishing condition. When first introduced to Britain it was looked upon as the greatest novelty of the day. The great horticulturists of the metropolis of the world vied with each other in their anxiety to see it produce its splendid racemes of flowers. Its introduction had been attempted several times by Dr. Wallach, the describer of the plant, but without success, until the duke of Devonshire sent Mr. Gibson into the Birman country on a special mission to procure the *Amherstia*. This undertaking proved successful, as Mr. Gibson introduced to the conservatories of Chatsworth a fine living specimen. But strange to say, with all this labor, expense and care, the specimen at Chatsworth failed to produce flowers, until at length a much younger plant introduced in 1847, by the attention of Lord Hardinge, to the conservatory of Mrs. Lawrence, at Ealing Park, near London, by careful and scientific skill in cultivation bloomed for the first time.—There were also, plants introduced to Kew, Chiswick, and Frogmore gardens, about this period. A similar fact may be observed with regard to that king of the *Proteaceæ*; *Stenocarpus Cunninghamii*. The first specimen of this fine plant introduced to Kew gardens, although it flourished and became a fine and healthy specimen, failed to bloom, while a small cutting of one foot high, no doubt emanating from one of the first introduced plants, furnished a beautiful bloom, in a temperate house at the garden of the United Gardeners' Society, Chelsea. The form of the flower of the *Amherstia*, is somewhat peculiar. Although a leguminous plant as may be easily seen by its pod, its flowers do not at first sight seem to be of the papilionaceous or butterfly form, so common in that order. In a description of the figure of the plant given in the "*Flore des Serres*," of Van Houtte; which was copied from the original drawing in Dr. Wallach's "Rare

Asiatic Plants," a copy of which we believe is to be found at the Academy of Natural Sciences in this city; we find the following remarks: A Martaban tree, forty feet high, with deciduous stipules, and large abruptly pinnate six to eight paired leaves; flowers in large, beautiful, pendulous, scarlet, axillary racemes; petals, the lateral ones, reddish, and the hinder ones, spotted with yellow round eyes on the apex; pod, coriaceous, red.

It is still the only type of its genus, and may be grouped with the genera *Jonesia Humboldtii*, *Azelia*, *Anthnota*, *Palovea*, *Eperua*, *Parinya*, *Macrolobium*, etc., of the same natural order and group, *CASALPINIÆ*.

In its general appearance and foliage it recalls to our minds the *Brownea* of South America, a plant also lately introduced here, producing beautiful heads of bright scarlet flowers, suggesting to the superficial observer a connection with the rose family;—with which order, botanically, leguminous plants are closely connected. Two species of *Brownea*, *B. coccinea* and *grandiceps*, are now to be found in the city conservatories of Philadelphia; and this new acquisition makes up three individuals of this natural family.

The name *Amherstia* was adopted by Wallach in honor of the countess of Amherst, and her daughter, Lady Sarah Amherst, both zealous and accomplished promoters of botanical science in the East Indies.

Dr. J. E. Planchon says, in his description of the plant in Van Houtte's "*Flore des Serres*," from which some of the foregoing details are translated:

"Its whole history is in unison with the grandeur and beauty of its attractions. Its flowers adorn the altars of the god of the Birmans. Its name recalls the graces united with science. Its discovery, introduction, and publication, are due to the generous patronage exercised over botanical science by the Hon. East India Company. In conclusion, its flowering at Ealing Park constituted one of the greatest triumphs which horticulture has for some years inscribed on her annals."

*Cultivation*.—Mr. Smith, states that it is of great importance to protect its leaves against the direct rays of the sun, as the membranaceous texture of these organs

renders them very sensitive to the effect produced by sudden evaporation. The defects observable in this respect are caused, perhaps, by too dry an atmosphere, or by the insufficient quantity of liquid absorbed by the roots. It appears that the greatest care has not been sufficient to protect the edges and top of the leaves from being burned and scorched; thus imparting an unhealthy appearance to the tree. But this is an evil from which *Brownea* and several other plants, furnished with leaves of a similar texture, often suffer. The specimens of *Amherstia* in the botanic garden at Calcutta even do not escape this defect. A perfect drainage, and soil permeable to fluid, are indispensable conditions to its successful cultivation. It may be propagated by cuttings placed in a hot-bed without a bell-glass. It is not likely the plants will produce seeds in our houses. Should the plants succeed here so as to flower, we are disposed to believe that it would ripen its seed in our climate.—*Philadelphia Florist*.

#### *Pteroma Elegans.*

THIS showy plant is worthy of more attention than it is accustomed to receive.—Perhaps the following remarks may be the means of bringing it a little more into notice, and of inducing some who have hitherto considered it as a second-rate plant, to give it a trial; and under proper management it will not fail to give satisfaction.

*Pteroma elegans* should be treated as a green-house plant, and not, as we generally find, as a stove plant. We shall commence with a plant that has enjoyed its season of rest, say in a six inch pot. As soon as it begins to exhibit signs of starting into growth, it should be potted into a twelve inch, in a compost of equal parts of loam and peat, with a portion of white sand added, and plenty of drainage. During the period of vigorous growth, frequent stopping to equalize the specimen must be resorted to; and we would advise a thinning of the shoots to prevent a redundancy of wood. Syringing, during the period of rapid growth, should also be practiced, but discontinued as soon as the plant exhibits signs of the completion of its growth; and water should not be so copiously applied to the roots, in order to induce it if possible, to ripen its wood; for unless the

wood be well ripened, we need expect no flowers. As soon as the growth is completed, the plant should be removed to the open air, to a sunny place, taking care to protect the roots by plunging in ashes, or placing the pot in a larger one, and filling up the space between with moss. If the summer prove wet, the specimen had better be kept in the green-house, exposed to all the light and air possible, as too much wet might induce a second growth, and thus destroy the flower buds, and with them our hopes of a splendid inflorescence. After the ripening process has been properly effected by exposure as directed, the plant should be removed to its flowering quarters; and during the development and expansion of the flower buds, occasional doses of weak liquid manure may be given with advantage. One more point in its management and I have done. After flowering, it should be induced to adopt a season of rest, by slightly withholding water (not however to such a degree as to cause a denudation of its foliage,) and by keeping it near the glass in an airy part of the green-house. By the above system of management, I have been able to produce a specimen with upwards of 300 flowers on it, and truly a magnificent sight it was.—*American Gardener's Chronicle*.

#### Winter Garden.

DURING the winter, whenever the frost will admit, dig or plow up ground for next year's crop, trenching with spade or subsoil plow. The exposure to frost and alternate freezing and thawing, mellowes the soil and destroys weeds and insects. Cut off asparagus tops close to the ground, and clear out thoroughly all weeds. Spread manure over the bed three inches deep, covering slightly with earth from the alleys. These should also be manured, the whole to be forked in and spaded in spring. Take up and secure before severe frosts, beets, carrots, salsify, turnips, et. Place them in moderate sized heaps out of doors, covering first with straw and then with a few inches of earth; or if cellar room is convenient, they may be placed in barrels or casks, mixing earth through them and covering with sods. Have shutters or straw mats at hand for covering cold frames of cabbages, cauliflowers, et. These should be inured to cold, by exposing in mod-

erate weather, covering only at nights.—Give air to forcing frames to prevent plants from drawing. Manure rhubarb beds with a heavy coat, both on plants and in alleys, which should be dug into the latter; cover with straw, litter or brush. Take up horse-radish, and lay away in sand or earth for winter use. Dig up parsnips for early consumption, and place in barrels, covering with sod. Collect and preserve pea sticks, bean poles, et. Gather up cabbage stumps and all other rubbish, and carry to the manure heap.—*Farm Journal*.

#### Transmission of Seeds in Soil.

At a recent meeting of the Edinburgh Botanic Society, Mr. M'Nab read a paper, in which he stated that he had been long in the belief that the transmission of fruits and seeds in a state fit for germination, would be better accomplished by being packed in soil than by any other known method. This experiment was fully tested by himself during 1834, when he brought over the seeds of many American oaks and other trees, in boxes filled with soil, while portions of the same kinds of seeds packed, both in brown paper and cloth bags, were, in many instances, totally useless.

The method he adopted for the American tree seeds, was as follows:—He purchased several strong deal boxes about fourteen inches in diameter, and made of three-quarter inch wood. He afterward procured a quantity of soil, taken from a depth of eight or ten inches beneath the surface, so as to possess only a natural dampness. A layer of the soil two inches deep was placed on the bottom of the boxes, above which a layer of seeds was distributed; another layer of soil and then seeds, and so on till the boxes were full; the whole was pressed very firmly down, when the lids were nailed on, allowing no possible room to shake about. When they reached Edinburgh, December, 1834, the seeds and soil were sown over the surface of shallow pans and boxes. During the following spring they grew freely; while of those brought home in the paper and cloth bags, comparatively few of the varieties grew, the acorns being, without an exception, perforated with insects. The kinds which grew were from four to five weeks

later of vegetating than those brought home in the soil. Acorns brought home in a box of sphagnum moss, after the superfluous moisture had been wrung from it, were equally successful with those in soil.—*London Farmer's Magazine*.

#### Botany of Ohio.

WE have learned with much pleasure that James W. Ward, Esq., of Cincinnati, a gentleman we have reason to believe quite competent to the undertaking, is engaged in preparing a descriptive catalogue of the plants indigenous to the state of Ohio. This is a good work, and botanists will be glad that Mr. Ward has undertaken it. To facilitate his labors, gentlemen and ladies interested in the science are desired to communicate with him on the subject, sending either specimens or descriptions, or both, as they may feel disposed.—*Annals of Science*.

#### Tropæolium Lobbianum.

THIS beautiful Tropæolium is worthy of a place in every collection where plants are required for winter flowering. Of all our collection of creepers, this is by far the most showy at this season of the year. I have ten specimen plants of it, which have become a complete mass of flowers ever since the middle of October last. As it does not produce seeds freely, it is advisable to propagate it by cuttings, which should be selected in June or early in July. I always place single cuttings in small pots filled with sand, and plunge them in a little bottom heat.—As soon as they are well rooted, I pot them into six inch pots, and place them in the green-house. With proper treatment, they will be ready to receive their final shift into twelve inch pots about the end of August, using soil composed of equal portions of sandy loam and peat with thoroughly decomposed horse manure and a quantity of good sharp sand to keep the compost porous. After this final shift, I place a wire trellis to each plant, firmly secured to the pot.—They are then placed in the stove, and as soon as the plants commence rapid growth, every shoot is carefully trained so as to cover the trellis regularly. By the end of September this is complete, and the plants will be showing hundreds of bright orange flow-

ers. As soon as the blossoms fully expand, the plants may be removed to the conservatory or green-house, where they will continue to produce a succession of flowers for a long time.—*Gardener's Chronicle*.

#### Farmers' Gardens.

EVERY farmer may, if he will, have a garden, not a patch of onions here, of beets there, of cabbages somewhere else, interspersed with bean-poles and potatoes, but a veritable garden, a cultivated place.

A farm that has not a plot of ground adapted to the purposes of a garden, had better be abandoned at once. There is no good reason why the real luxuries that spring from the soil, under the culture of the practical gardener, should be confined to the lands of the gentleman of leisure. They belong as legitimately to the sturdy, hard-working farmer, and indeed more so; for he who labors most actively, should reap the richest harvest. All that serves to make life more desirable, that tends to the improvement of the soil, the mind, and the heart, is not beneath the attention of man. We cannot conceive of a more fit place to commence the careful cultivation of a farm than the garden. It would soon be evident that the greater care bestowed on the soil, the greater its product; and so a system of culture would by degrees be adopted, till the whole farm should become a fruitful field.

In the cultivation of a garden, can be noted on a small scale all the phenomena of growth, and from data there gathered, one can advance successfully from the tilling of narrow beds to that of broad acres. The knowledge necessary to success in gardening, is rather the result of experience, than of fixed rules. There is requisite a taste for the art, close observation, and a modicum of practical skill; give these, and common sense will supply the deficit. We would not by any means, profess to teach gardening "in six easy lessons," but we assert that any one so disposed can make a beginning.

There are certain adjuncts to a garden, which a majority of farmers who take the trouble to cultivate a few esculent roots seem to think altogether too trifling to merit their attention. Such are beds of flowers,

flowering shrubs, and grape and other vines. That ever potent argument of expense, and the ready excuse of poverty, cannot be urged against these decorations of the farmer's home. A man may be too poor to erect a costly cottage, but no one is too poor to cultivate a bed of flowers, to plant shrubbery around his humble dwelling, or to train a vine to relieve its bare exterior. A beauty unattained by any triumph of art, is thus in the reach of the most obscure. Nature waits to provide, "without money and without price," the ornaments of a cultivated field, and pleasure of a cultivated mind.

Contrast for one moment, the cottage and the lawn, with the rude dwelling and its ill-kept grounds—compare the beauty and fragrance of flowers, with the unsightly weed and its rank odor—mark the difference between the luxuriant green of shrubbery, and the vacancy of barren yards, and then decide whether an hour of time can be better spent than in effecting such a change.

The past few years have wrought a manifest improvement in matters of rural taste, but as yet its evidences are confined to cottages and farm houses, scattered here and there, like oases in the wild desert. It will be seen, however, that as agriculture advances, and system takes the place of confusion, all these things will receive the attention that they so richly deserve.—*Albany Cultivator*.

#### State Chemists.

THE following article from the *Express* at Amherst, Massachusetts, is indorsed in part by Professor Mapes, who says, in confirmation—"We could quote more than one hundred cases where the profits have been nearly or quite doubled, and the value of the land permanently increased, by the judicious application of such manures as analyses prove to be required by the soil." And further adds—"Our legislators continue to amuse their constituents with pretended attempts at establishing Agricultural Bureaus, etc. A few years more, and their constituents will render the establishment of such bu-



rears the leading question in selecting their representatives, both to state legislatures and to Congress.

The farmers of this state should demand of the government a Chemical Laboratory, and the employment of a chemist to analyze their soils. If the laboratory should be connected with a farm school, it would be all the better. The school, if well conducted, would be a great good to the whole community, and not merely to one interest. But the laboratory should be established, at all events. The chemist should be a *young* man, one who was a profound chemist at twenty, who has been *enthusiastic* in that science ever since, and is now not more than twenty-five or thirty years old. He should be furnished with every requisite for the most searching investigation of soils; and he should be a *working* man, willing to work three hundred days in a year at least, an enthusiast in his profession, one who with Liebig's zeal, and with the advantage of discoveries already made, would go further in his researches than Liebig or any of the older chemists have time of life enough left to go. He should investigate soils for farmers, report the deficiencies to them, and explain to them the cheapest mode of supplying those deficiencies. The result would be, that in ten years the farms of Massachusetts could be kept in high fertility with half the expense now required to keep them in only a tolerably productive condition. Proofs that such a result might be reasonably anticipated are abundant. One fact only will be given here, and others will be reserved for future occasions. Mr. William P. Dickinson, of Hadley, had a field of eight acres thoroughly grown over with moss, almost as thick and matted as the wool on the back of a sheep that will give a ten pound fleece.—The land of course must have been exceedingly unpromising for any crop. He procured an analysis of it by the late Professor Norton, and was told that it was deficient in two or three ingredients which could be cheaply supplied. For this analysis and a long letter, advising him how to supply the deficiencies in the cheapest possible manner, he paid ten dollars, and was laughed at, as commonly happens when a man ventures a step out of the beaten track. He plowed that field and treated it in every respect as

Professor Norton advised, with the exception of here and there a couple of rows, which were cultivated as he would have cultivated the whole if he had not been otherwise advised. The result is a crop of corn, now in the field, equal to perhaps twenty bushels to the acre, where cultivated in the old way, and very nearly fifty, where cultivated as Mr. Norton advised. This, I know all might have been, and yet there be no increase of profit, for the extra corn and fodder (both more than doubled) might have cost more than they are worth. But it was not so in this case. Mr. Dickinson, after keeping an exact account of the expense, gives it as his deliberate opinion, that the increased profit, in consequence of Mr. Norton's advice, is at least fifty dollars this year; and besides this, he has better hopes for that land hereafter, and has, moreover several fields of similar land adjoining that, to which Mr. Norton's prescription will apply. He values the advice much higher than its cost.

Mr. Norton is called from a most useful and too hard-working life, to his reward; and there are few Mr. Nortons left. I do not therefore advise farmers to be in haste to send their soils out of the state to be analyzed; but I do advise them most earnestly to *demand* and to *have* a working chemist of their own, who will enable them, by telling them just what to apply, to keep their lands in a high state of productiveness, at far less expense than they could without such advice. Millions can be saved to the state in the economy of manuring, and millions gained in the increase of crops, and as all will be benefited, all should share the expense.

Now we in Ohio may suppose we have tried a state chemist—and feel that we have little to show for it. It is not so. We did appoint such an officer, but at the same time crushed him with the laborious duties of corresponding secretary of the Board of Agriculture, and withheld the means and appliances absolutely necessary to the expected analyses. It has been the fashion with some periodicals to decry chemistry and chemical analyses. Cheap ones are indeed of very little value, but, like everything else, if worth doing it is worth doing well.—Ed.



## The Vineyard.

### VINEYARD CALENDAR FOR FEBRUARY.

It is proposed to furnish a series of brief memoranda upon this subject during the current year for the sake of refreshing the memory of the reader. The articles of last year were pretty full, but the subject is not yet exhausted. A brief synopsis of what has been already furnished is all that it is now proposed to repeat, but upon some topics it may be considered advisable to enlarge somewhat.

**Pruning.**—Having provided himself with a good sharp knife, the *vigneron* will select pleasant weather, when the vines are not frozen, but before the sap has begun to start, and betake himself to the labor of pruning his vines. The first thing to be done is to cut the vines loose from the stakes; if they be feeble, cut back freely, removing everything but the lowest good shoot of last year's growth, which should be shortened to two eyes, from which to grow strong canes for another year. If the vine be strong and healthy, select the largest and stoutest shoot, coming out as low down on the stock as may be, trim off all laterals and old tendrils neatly, and cut it off at six, eight, or ten eyes or joints, according to the strength, but be sure not to leave too much wood. The lowest best shoot is then to be selected for the spur, and it should be as

low as possible; cut it back to two or three eyes, and cut off smoothly all the old wood of last year's crop and all extraneous shoots; strip off the loose bark formed on old vines and leave the stock to be tied at a later period.

There are some differences of opinion respecting the height of the stock, but most of our best *vignerons* advocate the short stem or low pruning as above suggested.

**Layers.**—Should there be an occasional gap in the vineyard, now is a good time to provide for filling it up by a layer from one of the nearest vines. For this purpose, the trimmer must select a good long branch that will reach to the gap, and leave it for making the layer next month.

**Banks and Walls** should be repaired whenever the ground will allow working—if the rains or frosts have injured them, they should be made up at once, and all tendency to wash must be checked immediately.

**Trenching** new ground, which should have been progressing the whole winter, except during the severest frost, must now be completed, as it will soon be time to set the young vines in new plantations.

**Cuttings.**—The trimmings are all to be collected and at once cut up into slips; this operation may be performed under shelter

in stormy weather. Good, sound wood, with short joints, is to be selected and cut into lengths of eighteen to twenty-two inches. When it is convenient, a small piece of the old wood is left on the base of each cutting, as such are considered most likely to grow. They are now to be tied up neatly in bundles of two hundred and fifty each, and then placed in a cool cellar.

A better plan, however, is to dig a trench, set the bundles vertically, close together, and cover with the earth that had been thrown out. The greatest care should always be taken to prevent the cuttings from becoming dry. The trimmings should be gathered into the cellar from day to day and occasionally sprinkled with a watering pot.

#### Scuppernong Vineyard.

In the *Southern Cultivator* is found a series of articles on vineyards, by the celebrated S. Weller, of Brinkleyville, North Carolina, who is always referred to as the exponent of the Scuppernong culture. Let him describe the result of his labors:—

A complete Scuppernong vineyard exhibits to the eye, at a horizontal view, a continuous canopy, or a sheet of vine branches so dense in time of leaves as to be almost impervious to the sight. To one underneath the canopy, and looking upward in fruit time, the berries, as thick as hops, and as large as musket balls, appear hanging in clusters of three to nine or ten, and sometimes more. But the most beautiful sight, as to fruit, is to look down from an elevation above. To the lover of grape fruit, the clusters glittering in the sun in green and light yellow, according to maturity, amidst the foliage, is a very cheering, inviting, appearance. Underneath the canopies, (six, eight, or ten feet high,) viewed horizontally, nothing should be seen but main stems of the vines, and the posts to support the scaffolding. Here lies the secret of sure and prolific bearing. For, if any branches are suffered to hang down and impede the free circulation of air beneath the canopies,

this difficulty alone will more or less prevent a full crop. From the very start of the outspreading branches, none should be suffered to train downward, but scaffolding ever kept before them in anticipation of their growth and extension. Above I speak of a complete Scuppernong vineyard in the best bearing state. But some parts of my vineyard are complete, and some not so; but as to the latter, the vines extend over fruit and other trees, and are then not so prolific, or each is some interruption or impediment to the other. Though the Scuppernong vine is more apt to injure the tree than the tree the vine. But if either kill the other the Scuppernong gets the victory. Yet, as one striking instance of both doing well, I select the case of two of these vines planted in the edge of the garden of a near neighbor, some fifteen years since. They were trained from the garden upon oak-trees in the door yard some distance. They spread over the trees some hundreds of feet in various directions, and bear or have borne on the trees enough grapes for years past to make two barrels of wine annually, besides abundance of fruit for family use during the two months of their continuous ripening, or from the middle of August till the first of November. This, though, falls considerably short of the single vine in Tyrrell county below, or in the native region of the Scuppernong, that produces, besides eating fruit for the family and neighbors, five barrels of wine annually, on scaffolding of near a quarter of an acre, such as before described. But the last named cases are somewhat extraordinary.

He then proceeds to describe his canopies or level trellising, which is done in a very diffuse manner and may be condensed as follows. The grapes being planted thirty feet apart, posts are set fifteen feet apart each way, when the vines have reached eight feet in height; upon the tops of these posts poles are laid from one to the next, and across these other lighter poles are laid. All the sticks should be deprived of their bark. By way of making a more permanent arrangement, he proposes erecting stone pillars thirty or forty feet apart, and the intervening posts are set upon a flat.

stone to keep them from the ground to avoid rotting. This expense he considers nothing when he is producing *two thousand* gallons of wine per acre. Iron pillars are also suggested; and the diffused method of training is considered necessary for this grape.

## Transactions.

### THE CINCINNATI HORTICULTURAL SOCIETY.

INTERESTING specimens of fruits have been presented upon the tables of this association from week to week, and have elicited useful and interesting discussions upon their characters and other qualities; affording a fine opportunity for all who choose to embrace the opportunity, to study pomology, so far at least as to be able to purchase a barrel of good apples or to plant an orchard judiciously. The latter is no small consideration, when we consider that few men plant a second orchard, and that a majority of our predecessors have planted a preponderance of inferior fruit.

The committee appointed to prepare a suitable memorial to the State Board of Agriculture, to procure through the legislature a change in the law, that should recognize and admit delegates from horticultural societies, reported a petition, which was intrusted to a deputation to present at the meeting of the board on the 11th ult. On their return, they reported the courteous reception by that body of themselves and their petition; which, however, was not acted upon by the board in a manner at all satisfactory to the members of this society, inasmuch as it was not considered best to ask for the desired change in the law.

The time for holding the Autumnal Fair has excited a good deal of discussion, and has finally been fixed upon the third week of September, 22d to 25th, or perhaps longer, as it is proposed to use a tent upon some vacant lot in the city.

On the first of the year the following officers were elected:

*President*—S. Mosher.

*Vice-Presidents*—G. Graham, R. Buchanan, A. H. Ernst.

*Treasurer*—W. Stoms.

*Recording and Corresponding Secretary*—John A. Warder.

*Council*—S. M. Carter, A. Worthington, Wm. Orange, J. P. Foote, M. McWilliams, M. Kelly, D. McAvoy.

*Flower Committee*—W. Cox, Sr., J. Dunlap, R. Davies.

*Fruit Committee*—S. M. Carter, M. McWilliams, A. H. Ernst.

*Vegetable Committee*—A. Worthington, G. Sleath, Henry Ives.

*Financial Secretary*—Henry Ives.

### Ohio State Board of Agriculture.

THIS important executive body, to whom the farmers of our state have intrusted the guarding and guiding of the great interests of the community, has just held a very laborious session. Sundry matters of unfinished business were disposed of; but the chief work was the reconstruction of the premium lists, in which great care was exercised, and active endeavors were made to render the schedule acceptable to the competitors. This is always a very nice matter to effect, owing to the varied interests involved and included under the broad shield of an agricultural society, which, in truth, necessarily embraces almost every department of productive labor that is pursued within our borders. The success of these great and noble efforts remains to be seen, and must be proved by time; certainly the devoted men who have been earnestly laboring in the cause of the producers, richly deserve the thanks of their fellow-citizens, whom they are gratuitously serving. If any one be disposed to cavil at the result, let him try his hand in adjusting a schedule to suit the limited and more uniform wants of his own local society.

Among the resolutions adopted by the board was one encouraging and recommending county societies to award some of their

premiums in appropriate books and periodicals. This is admirable. Cultivate the intellect; encourage men to read and to think; we shall then have better workmen, better results, and consequently better reports and very much better written. For all of which there is yet room, notwithstanding our boasting. The next great labor was that of filling committees; and this is no light affair, even with the increasing facilities furnished by an extended knowledge of the men who have previously acted, and the excellent result of the action of the board itself in issuing circulars to every county, soliciting names of suitable persons, by which has been secured a large store of names of persons who are considered by their own neighbors good judges of the various articles. It is hoped that this list will enable the executive committee to fill vacancies that may occur at the time of holding the fair at Dayton, on the 20th of September next; but as every committeeman will soon receive a notice of his appointment, it is earnestly hoped he will at once signify to the secretary his acceptance of the appointment, and afterward keep his engagement faithfully, by reporting himself on his arrival at the fair grounds.

Another matter of deep interest to some of the agriculturists of Ohio, came before the board, in the shape of a petition from the Cincinnati Horticultural Society, to have the law so amended as to admit horticultural societies to the same privileges as the county agricultural associations. This paper, emanating from one of the oldest and most useful organizations for the promotion of agriculture to be found in the state, and presented by men of the highest respectability, was received favorably by the board, but was not made the subject of any legislative recommendation by that body, because, as it is understood, some of the members considered themselves *instructed* by a vote taken in the convention of delegates, on the 8th December last, when, as it has already been shown, (see page 180,) the matter was not fairly presented to the members of the convention, who certainly did not so understand the question at issue. However, though the votes of men may regulate the affairs of a nation, they can not change the principles of nature. Horticulture, even if voted out of the pale of agri-

culture, is her sister still, and can not be shaken off; neither will she be banished from the exhibitions, even when excluded from the councils. So look out for the best floral and pomonal display at Dayton that has yet contributed to attract the thousands of visitors to these great jubilees of our rural population. If we be blest with a favorable season, the orchards shall bend with golden fruits; the tendriled vines shall crowd their purple branches; the green-houses shall cherish their perfumed and brilliant gems from foreign lands; and the parterres shall luxuriate in gorgeous hues for the glory of the next state fair. Amidst the lowing of the sleek and fatted kine, the neighing and prancing of the noble steeds, the clatter of machinery of every kind, and the array of all the manufactured articles of every variety that will there claim a share of attention, modest horticulture, with her fruits and flowers, will cling about her favored altars, and again receive the unasked plaudits of the thronging crowds that always follow in her lovely pathway and cluster around the center of her powerful attractions.

#### Indiana State Board of Agriculture.

On the 6th of January, this very energetic body of the true patriots of our neighbor state met to carry on the good work they have commenced; that of improving the great interest of agriculture, the basis of the greatness of the state; and they very properly feel it a proud position.

After the recent happy first efforts, the friends of improvement felt much encouraged to go on in the good work they have so nobly begun; this meeting was very spirited and deeply interesting, as the discussion upon various topics was freely and earnestly conducted. All the delegates from the county societies are considered full members of the board at this annual session, and are expected to participate in the action of that body.

The meeting was organized at the appointed hour by the president of the board, Joseph A. Wright, Governor, who is very devotedly interested in this great *home* subject. His able colleagues were generally present to receive his suggestions and aid in the execution of the plans offered to advance the objects of the agricultural law;

the development and improvement of the industrial interests. As the counties were called, each delegate received bound copies of the reports of Indiana, and also of the states of New York, Michigan, and Ohio, which the president had obtained by exchanges. Valuable information as to what is doing elsewhere is thus diffused through the state.

A resolution was advocated with a great deal of spirit, recommending, as useful premiums, suitable books, periodicals, and farm implements. This recommendation was adopted after a free expression of opinion on both sides of the question. The county societies were also recommended to pursue a similar course.

The requisite number of new members of the board was elected by the delegates in attendance. Delegations were also appointed to attend the state fairs of other states. And, on the motion of the president, the following were appointed delegates to the United States Agricultural Society, to attend its annual meeting, at Washington, D. C., February 2d:—G. B. Graff, G. D. Wagener, G. W. Cathcart, Calvin Fletcher, and Rev. Corey.

During the sessions of the society a number of gentlemen opened a subscription list to a stock importation company, which was advocated by several eminent farmers as a means of improving the cattle of the state. The subscriptions were liberal and the friends of the measure are sanguine that the objects will be early and successfully accomplished.

A very interesting feature of this meeting was the beautiful display of fruits, grains, seeds, and roots that had been brought together. Could the notice have been more general it would have been much larger; but, notwithstanding the bad state of the roads and the derangement of the railways by the freshets of the preceding month, the display, of apples especially, was extensive and deeply interesting.

In consideration of the importance of the orchard among the productions of the state, the board very wisely, and it is believed very usefully, appropriated part of a day to the consideration of the specimens. A committee of pomologists was appointed to examine, present, and introduce the fruit to the meeting, when the members discussed

their merits. The committee selected chiefly those which were of acknowledged excellence in some sections of the state, and in the discussion it was stated whether the variety had failed in any region. In presenting or introducing a fruit, its general characters were stated; the limits, so far as it was known, where it had proved successful or otherwise and any other peculiarities that had come within the knowledge of the committee. And in the discussion that followed, many very useful hints were dropped incidentally upon the management and treatment of orchards, their diseases, etc. In this way a number of facts were elicited in connection with a list of varieties that had been found to be generally successful or were adapted to special localities in the state; all which will possess a deep interest if it have been reported for the use of those who were not able to be present, but who will be anxious to read a condensed account of this and the other valuable discussions upon other important topics that were brought forward; such as those upon old and new seed, corn and wheat, and the best methods of planting, etc. As an evidence of the value of the meeting, as it was appreciated by those present, it may be stated that members said they could not estimate in dollars and cents the value of some things they had heard.

On Friday the whole company dined with the president of the board, whose kind hospitality has passed into a proverb with all who have come within the reach of its appreciation. On Saturday the new board organized, by the unanimous re-election of his excellency Joseph A. Wright to preside over their deliberations. This high office he justly appreciates; and it is even said that he prefers it to a seat in the senate of the United States, which was then vacant. Wm. T. Dennis, of Richmond, was elected secretary, an important post, for which he has at least the valuable qualifications of untiring energy and industry, with an intelligent acquaintance with the great subject in hand. The state fair will probably be held at Richmond, upon the last week of September, although that period is unfortunately the same selected by our northern neighbor, Michigan. Various matters of detail, and the arrangement of the schedule of premiums were left for the

executive committee, who will probably act upon the suggestion, so happily urged by the energetic delegate from Shelby county, to endeavor to diffuse information by awarding appropriate books and periodicals as premiums.

Success to the Board of Agriculture of Indiana. May it go on in the good work commenced under the favorable auspices that have already smiled upon it. And may it ever consist of men equally devoted to the cause, and equally attentive and courteous to the stranger within their borders.

#### Illinois State-Board.

No news has yet been received respecting the doings of the convention of agriculturists that was to have been assembled at Springfield, Illinois, except that a committee was appointed.

#### Ohio Pomological Society.

THIS association held an interesting meeting at Columbus, Ohio, on the 11th ult., by adjournment from the summer meeting. A. H. Ernst, president, and other officers, were all in attendance; and the society was called to order to proceed directly to the consideration of the handsome display of fruits upon the tables. They had been collected from New York, Michigan, Indiana, Kentucky, western Pennsylvania, and our own state.

Commencing with *Rawle's Janet*, it was remarked by some, that those presented from Indiana and Kentucky were not so sprightly as those from Ohio. The several synonyms of this fine fruit were called; but nothing new elicited. All had observed the valuable property of late blooming. A. L. Benedict showed another apple named *Red Janet*.

Mr. Thompson, of Groveport, stated that on his dry black loamy bottom lands, he had grown the *Janet*, larger, more red, more solid, and with whiter flesh.

Mr. Buchanan considers it the most certain and enormous bearer on his deep reddish [yellow] clay, containing lime and iron. Some specimens were shown from Indianapolis and Kentucky, of unusual size.

A description of the fruit, and its diffusion in Kentucky, by John Lightfoot, was read, from Mr. Saunders, of Grass Hills,

Kentucky, whose specimens were genuine *Rawle's Janet*.

Mr. Buchanan and Dr. Warder thought this an apple that deserved general culture in Kentucky, Tennessee, Arkansas, Missouri, Illinois, Indiana, and southern Ohio. Mr. Elliott had seen it very fine in northern Illinois.

The *Fall Queen*, from Mr. Saunders, of Kentucky, was next introduced—out of season. This large red apple has been frequently shown by Mr. Saunders; at our August meeting—it was not quite ripe. A synonym was reported from Indiana, *Red Gloria Mundi*, and *Mundy's apple*, because it was supposed to have originated at *Mundy's Ferry*, in Kentucky, where it has been grown considerably. It is also known in Tennessee as the *Horse apple*.

The *Gilpin* was exhibited from several sources; among the rest, very large specimens from Mr. Hall, Switzerland county, Indiana. Its several synonyms, *Romanite*, *Carthouse*, etc., appeared familiar to the members. It was generally admitted to be a great bearer, good keeper, but not a superior table fruit.

A *Sweet Romanite* was exhibited; not known. A. L. Benedict showed a seedling *Romanite*, which was said to have a more tender flesh, but not so good a keeper.

*Westfield Seek-no-further*, from different sources, showed great varieties in coloring. Those from Michigan were clean, clear, bright red; those from Ohio were more or less russeted, and some so much so as almost to conceal the red. It was stated that those grown in deep loamy bottom lands did not keep well. *Sweet Seek-no-further*, of W. B. Lipsey, was considered too dry.

The *American Golden Russet* was universally admired. It, too, presented great variations. From the north, it was still hard and firm; from the south, it was past prime. Specimens were conical and some almost flat; some richly russeted, others scantily, on a yellow ground. Those from Indianapolis were very large, and heavily coated with a coarse russeting, depreciating their good looks, but not affecting their excellent flavor. Other russeted apples were shown, with different qualities; some, the true *Roxbury*, both smooth and rough. The *English Russet* was not recognized.

Mr. Bateham presented some *Rhode Island Greenings*, that were so thickly coated with russet toward the eye, as to be mistaken for Roxbury until the genuine marks of the stem and base displayed its true characters. Then a specimen from western New York was presented, that was wholly clear of russet. One from Indiana was remarkable for its size.

*Newtown Spitzenberg*, by R. W. Steele, of Dayton; declared to be a synonym with Vandervere of Downing—the same as Jo Berry and Ox-eye of Cincinnati market. Mr. Ernst and others thought that this was the apple intended by Cox, under the above name. We had received it from New Jersey, through the pioneer nurseryman of southern Ohio, Silas Wharton, to whom we are indebted for the introduction of many good fruits.

The apple supposed to be the true *Vandervere*, a very different fruit, was then introduced, under the name of Gray Vandervere. It is well known in eastern Pennsylvania and in Delaware, and is supposed to have originated among the Swedes there. Also the Yellow Vandervere, or Vandervere Pippin, a larger fruit, coarse and acid, excellent for cooking, and very extensively cultivated in western Pennsylvania, Ohio, and Indiana.

*Raritan Sweet* was presented by W. B. Lipsey and A. L. Benedict, both of Morrow county; they consider it valuable.

*London Sweet*, by R. Buchanan; a good keeping, white, sweet, flat apple, known by several names on the Great Miami—a good stock apple and useful for baking.

*Wing Sweeting*, from Benedict and Lipsey, who consider it one of the very best.

*Wine*, or Hay's Red Winter, was shown as Pennsylvania Red Streak, Doctor, and as Hoop.

*Rome Beauty*.—Nice specimens of this very good apple appeared.

*Michael Henry Pippin* was shown by A. Morris and R. Buchanan; and Dr. Warder presented fine specimens from Indiana, where it is almost exclusively known as White Winter Pearmain. This fruit, from its early bearing, great productiveness, and good keeping properties, will always have many admirers, although its table characters are rather negative. It is, however, almost always fair, and of medium size.

A. L. Benedict presented an apple as the *White Rambo*, which he prefers to Rambo. It is larger and white, ripe in January, but keeps till February. J. Morris sells more trees of this than any other variety.

W. B. Lipsey showed the *Bethlemite*, which he regards highly. A. L. Benedict and others, from the same neighborhood, concurred. Size medium, regular, red striped; keeps till April. Good.

*Beef Steak*, received through the Cincinnati Horticultural Society, from South Hampton, Vermont, was considered only second-rate. It is of medium size, and very prettily striped with red. This variety is said to be very hardy and prolific; but though commanding an extra price in the East, it is not worthy of introduction in this country, where we have many excellent fruits of the same season.

*Monks' Favorite* was presented from Mr. A. Stone, of Winchester, Indiana. It is large, globular, or flattened, regular, or slightly angular; skin smooth, entirely over-spread, mottled, striped and splashed with bright and darker red, on yellow ground, scattering, ragged, medium-sized gray dots; stem short, in a rather deep, regular, open cavity; calyx small, open, in a broad basin, with obscure folds or ridges; flesh yellowish white, tender; juice sub-acid, not rich, but good. This handsome fruit has a fine appearance and promises well. The following letter was received from Mr. Stone, of Indiana, and is all that has been learned respecting the fruit:—

*Dr. Warder*:—The history of this apple is, that John Monks, one of the earliest settlers of this (Randolph) county, procured the seedling some fifteen or eighteen years ago from a seedling nursery in the neighborhood. It bore early, and the fruit was very large. It proved to be fine and a good bearer. It keeps until June, and is in its prime early in spring. From these good qualities it was called "Monks' Favorite."

I have in my orchard a tree of this variety. It bore earlier than most of the other trees, and has been always full. The specimen you have is of the ordinary size. It is a good cooking apple at any time; rather



tartish for good eating until it is in its prime. It is a fine, thrifty tree, outstripping all its neighbors in growth, and it looks most beautifully in the fall of the year when loaded with fruit.

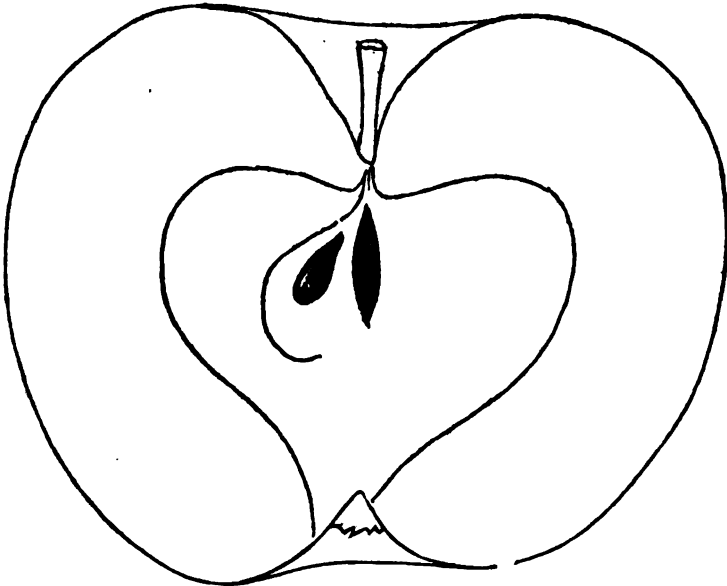
If on examination you consider it worthy of commendation, make whatever use you please of this communication.

#### A. STONE.

The *White Bellefleur*, or Ortle, was presented by several, under its various synonyms, chiefly Golden Pippin and Hollow-core. Universally admired as one of the most agreeable and most digestible of all apples, with a mild sub-acid, abundant juice, without any remarkable or high flavor.

*Pryor's Red*.—Among the specimens exhibited were some enormous specimens from Dr. W. T. S. Cornett, of Versailles, Indiana, who is a successful model orchardist, producing the finest Baldwins and other fruits that have been seen. He uses lime about his trees, and has escaped the bitter speck so common in the Baldwin as to have induced several persons to give up its cultivation. Mr. Buchanan recommended the Pryor's Red as a valuable variety to send to the southern market, where it brings a higher price than almost any other. All coincided in according it very valuable properties.

*Vermont Sweet*, presented by Dr. Roberts, is a light yellow, with a few small rough dots. Size medium; stem long and slender; cavity narrow; calyx small; basin abrupt, yet open and slightly furrowed; flesh yellowish white, dry, sweet. Said to be a great bearer.



MONKS' FAVORITE.

Several seedlings were presented, most of which were passed by as unworthy of notice, or were put upon probation for future trial. One from Mr. Buchanan was recommended for its keeping qualities. From Indiana, there was a white apple resembling the *White Bellefleur*, from the orchard of Fielding Beeler, and by him much esteemed. This is the same fruit that was in competition at the Indiana state fair as a winter seedling. It is a good apple, but not equal to its congener the *White Bellefleur*, which has been styled the prince of Indiana apples, so beautifully perfect is it there.

*Hinesley Pippin*, from Powell Howland, of Indianapolis, exhibited its firm, solid substance, securely wrapped in a compact dusky skin that protects it from the influences of the atmosphere until July, when it is said to be a good apple. Its merits cannot now be appreciated. Other seedlings from the same orchard were passed.

Many other good varieties were shown and discussed; but the reader is referred for a more minute account to the Transactions, which will shortly appear in pamphlet form. The Northern Spy and Red Canada, from James H. Watts, Rochester, New York, were admired by those who had now first beheld them.

Before adjourning, the society directed its officers to apply by a respectful petition to the legislature, for aid in the great work we have undertaken of rescuing the native fruits of Ohio from oblivion and otherwise enabling the orchardists of Ohio to obtain correct information respecting the fruits most valuable as being best adapted for their culture. All interested will desire the consummation of the wishes of this society, and that the aid of the state may through this medium be the means of diffusing much information that will add to the wealth and happiness of our citizens.

Appropriate votes of thanks were passed to the Ohio State Board of Agriculture, for a parcel of Pomological Transactions received from them; and also to the Columbus Horticultural Society, for the use of their comfortable rooms, where the sessions were held.

The society adjourned to meet again upon the call of the president and officers.

The next meeting was proposed to be held about the first of July, at Cleveland, to afford an opportunity for studying the cherry, which has succeeded remarkably well in that neighborhood.

#### The Third Industrial Convention.

THIS body met at Chicago on the 24th of November, and adjourned on the 25th, to assemble again in the city of Springfield, on Tuesday, the second day of the session of our legislature. This will be the day previous to the meeting of the State Agricultural Convention, and will accommodate both matters, as the same delegates can attend both meetings. The Chicago Convention was very respectfully, though not very numerously attended.—*Prairie Farmer*.

## Editorial.

### CORRESPONDENCE.

#### Notes on the December Number.

*Report of the Fruit Committee to the State Board of Agriculture of Indiana.*—Very interesting, particularly so in reference to new seedlings. The rules they have adopted should govern all similar committees. No doubt superior seedlings are constantly coming into notice, and all pomologists should endeavor to add to the lists of fruit, such as are really deserving of culture; but fruit committees should be well satisfied that the subjects offered possess some well ascertained superiority, before they recommend them, even for further trial, and this further trial should be such an one as to leave no doubt of its right to a place in the lists. In this way, we may see a prospect, even though distant, of having nursery lists that may be relied on; at present, each locality has its favorite seedlings, which are highly prized, because

many fruits altogether superior are not obtained there.

*St. Catharine Plum.*—Your French correspondents add greatly to the interest of your review. How Leroy's description of this plum makes one's mouth water,—60 plums, of superior quality, on a branch three feet long!! Shall we ever see such sights here? We may, if we can conquer the curculio.

*Death of the Broussonettia.*—Not much loss if all the specimens were dead. I am no great friend to the Ailanthus, but like it better than the paper mulberry. The discussion on the subject of acclimation in your society, is interesting. In your remarks on that subject, you say, "It will not do to blame old Sol with all the damages." Unless he can prove an *alibi*, the evidence is rather strong against him. Even, if by "the previous influence of sunshine, en-

abling the roots on the warm side of the tree to respond to the call of the buds above," he is, at least, accessory before the act.

The views of Prof. Lindley, Mr. Goepper, and Prof. Morreau, on this subject, show much research in the right direction: further research by such minds, with extended practical observations, may yet throw much light upon this still obscure topic.

May not many of the semi-tropical trees which we cultivate, though they cast their leaves in autumn, as deciduous trees, so far differ from true deciduous trees, as only to cast them when disorganized by frost, without fully entering into a state of hybernation; if this be so, the efforts of the tree, in warm winter days, to repair the damage done by the frost, would be constantly defeated by the cold of the succeeding nights, or by the cold chills so frequently experienced in our winters. Not being adapted to a climate which gives them several months of rest, the effort would of course be repeated as long as vitality remained, or until the cellular tissue becomes destroyed. Starch, we know, is found in the cellular tissue of most plants; this article may act an important part, in causing their death. In its natural state it consists of little ovate grains, differing in size and form in different plants, but in all containing a portion soluble in water, which is contained in an insoluble covering; boiling or freezing, ruptures this covering, and a mucilage is formed, the inner portion being dissolved and the outer portion remaining suspended in the solution. Freezing them certainly causes a great change in the fluids of a plant, by reducing its starch to a soluble form, in which it undergoes decomposition with great facility, causing them also, by this solution, to assume a viscous or mucila-

ginous form, liable to clog, or even stop circulation. At the same time, the action of the frost frequently bursts the sap vessels, so as to admit the air, which coming in contact with the dissolved starch, sets up fermentation, which we know, under favorable circumstances rapidly progresses from the saccharine to the vinous condition, and from the vinous to the acetous, and lastly, the putrescent stage; so that if the plant is not killed by stopping its circulation, as stated above, it has a fair chance of dying of gangrene, as in pear blight; the fermentable fluid becoming extravasated among the ruptured cells and acting slowly as the season advances. Do we not frequently see phenomena that would go to sustain these views?

Truly deciduous trees may become victims to the same train of action; but in these cases, I suppose a warm spell would be necessary to swell the buds and warm the roots before circulation would be carried on to a sufficient extent to do mischief. We have frequently seen the young twigs of the peach blackened throughout the alburnum by a cold storm in the spring, but as the season advances it recovers its healthy color again; in this case, the starch may have been appropriated by the expanding bud, as fast as was it changed to sugar. If disbudding such a branch should kill it, would it not go to prove that the fermentation of the sugar was the cause of its death? Enough of this: I hate theories.

*Oleanders.*—Your advice to your lady correspondent of Ripley, is good, but I doubt whether overfeeding was the cause of their casting their bloom; they are rank feeders and require more water than most other plants, and at the same time, *thorough drainage*. In the season of rapid growth they sometimes require water twice a-day, if fully exposed to the sun.

*Green Asparagus* is very good, but I must own a preference for the white, if tender. For market, however, the green may be best suited, for it does not get tough after cutting as the white does by forming woody fibers on exposure to air and light.

*Grape-Vines, winter and fall pruning.*—I have tried all seasons and prefer the fall, because, 1st, it is a season of more leisure than spring; 2d, the cuttings if you wish to grow them do much better than when taken off at any other season, if tied in bundles and buried in the ground scarcely ever failing to grow; 3d, I think I have noticed a more vigorous growth in vines pruned in the fall, growing side by side with those pruned in the spring. Vine growers should experiment and report the result. Everything connected with this culture is important. P.

#### VARIOUS ITEMS.

##### Horticultural Premiums.

THE amount of premiums offered by the Massachusetts Horticultural society, in the various departments, is as follows:

Prospective prizes (for new variety of fruits, flowers, etc.)	\$750
For gardens, green-houses, etc.	200
For fruits during the season	620
For plants, flowers, and designs	700
For vegetables	250

Total, .....\$2570

Such an amount, held up to the gaze of skillful culturists, cannot fail to bring out a rich display of interesting objects, and spectators as well as competitors, who live within convenient access to such a society's exhibitions, possess privileges which must be very highly prized.—*Albany Cultivator*.

The premium list of the Cincinnati Horticultural society, just issued for 1853, is coming along according to its ability.

For prospective prizes	\$900
For flowers and plants, etc.	335
For fruits	211
For vegetables	134

Total, .....\$1580

Let us, too, hope that all who may be

within reach of our exhibitions, either as contributors or as spectators, will also consider it "a privilege to be highly prized," that such liberality, calculated to bring forward noble efforts to make a grand display, will furnish them an opportunity

##### Agriculture in the Ascendant.

THE following sentiment is found in the Journal of the United States Agricultural Society, an institution in which I have a deep interest, and from which I have entertained great hopes, for the beneficial influences it is to exert upon American agriculture, despite all the croakings of others who are lacking faith in the possible usefulness of a central body.

Would that I could feel equal faith with Dr. Lee, in the advanced intelligence of our legislators, those who are reckoned, and who consider themselves the statesmen of America!

"The time has gone by, forever, when American statesmen can safely plead ignorance of the principles of agriculture. If one knows them not, his claim to the title of statesman, will be disputed by a nation of farmers, at the ballot-box, and his services, most likely, will be dispensed with."

##### United States Agricultural Society.

It is very much to be regretted that some of the Agricultural Press should have allowed themselves, perhaps without sufficient investigation, to be arrayed against this promising institution. The following extracts from the constitution, are presented to the reader, to show the plan of the society:

**BOARD OF AGRICULTURE.**—It shall be the duty of this board to watch the interests of agriculture, as they are or may be affected by the legislation of the country; to make such reports, memorials and recommendations, as may advance the cause of agri-

culture, promote and diffuse agricultural knowledge; to examine, and when necessary, report upon the practicability of establishing agricultural schools, colleges, and model farms; to set forth the advantages of agricultural and geological surveys, and to show the importance of the application of science to agriculture; to represent, through their reports, the relation of American agriculture to that of foreign countries, and endeavor to obtain information from such countries; to point out the advantage of introducing any new staples, seeds and plants, and obtain, so far as practicable, annual statistical returns of the condition of agriculture throughout the different states; all which information shall be published by the society, and form part of its transactions.

**EXECUTIVE COMMITTEE.**—The executive committee shall transact the general business of the society, and shall designate the time and place for exhibitions, regulate the expenditures, and take such supervisory charge of the business of the society as may best promote its interests. This body shall elect its own chairman; three members shall constitute a quorum.

The friends of the great work, from the North as well as the South and West, anxiously look forward to the first annual meeting, on the 2d of February, hoping to see a handsome delegation from all parts of our extended country, which certainly, from its very breadth, requires such a central body as this proposes to be, for the general collection and diffusion of agricultural information, and eventually, perhaps, for the management of great fairs. Let the states' and counties' societies, and township clubs go on as before, but let us also have one grand repository.

#### **Southern Agricultural Association.**

**ASSOCIATION OF THE AGRICULTURISTS OF THE SLAVEHOLDING STATES.**—At a preparatory meeting of planters, held in Macon Ga., Dr. D. A. REESE, of Ga., in the chair, it was resolved that they meet in Montgomery, Alabama, on the first Monday in May next,

to organize an agricultural association of the slaveholding States. This association is said to have become necessary for the advancement of the cause in the southern States, which have a similarity of object in their pursuits, and whose modes of proceeding are different, in many respects, from those in the north. Do not, in your zeal, gentlemen, entirely overlook our desire to take you by the hand, occasionally, at our annual convocations as heretofore.

#### **Winter Meeting at Albany, N. Y.**

FROM the *Journal* of the New York State agricultural society, it appears that the winter meeting to be held on the 8th-10th of February, is expected to be quite an exhibition. Fat cattle, grains, seeds, fruits and dairy products, are to be exhibited. The agricultural rooms, where the grains and fruits, etc., are to be displayed, will be the center of great attractiveness.

#### **Peach Buds,**

ARE all safe, they have neither suffered from cold, nor has the mild weather that has characterized the season, forced them forward injuriously. So far as examined, they are all sound.

#### **New Varieties of Table Corn.**

By the advertisement of Messrs. HOVEY & Co., it will be seen that among the novelties they present to purchasers, there is a new variety of table corn, called *the Old Colony Sweet Corn*, to which the Massachusetts Horticultural society have given high commendation, backed up with several handsome premiums, awarded to this variety, which is said to be even superior to the celebrated *Stowell Evergreen*.

H. P. BYRAM & Co., Louisville, Ky., inform me that they have received a supply of the *Stowell Corn*, which is offered to

those desirous of enjoying the real luxury of a most delicious esculent, which is said to extend its season longer than the older variety of sugar corn.

#### Agricultural Lectures.

A CAPITAL idea has been started in Massachusetts, and perhaps practiced elsewhere; it is for the State Board of Agriculture to employ efficient and practical men to deliver lectures upon agricultural topics, in every part of the country. Our people are anxiously waiting for information; they begin to feel the need of it, and it should be supplied. Will not our *department of agriculture* endeavor to furnish the article which is so much in demand? The *Ohio Farmer* suggests that, "by a little concert among Ohio farmers the thing could be done in this State. We have now about 70 county societies. If each one were to contribute \$20, and place it at the disposal of the State board, gentlemen could be employed whose sole business should be to spread information among the people on the subject of agriculture and the sciences akin to it."

#### Professor M. P. Norton's Lectures.

It is a matter of regret that the New York State society have failed to procure a copy of the course on agricultural chemistry, by this distinguished Professor, which gave great satisfaction last winter, when delivered at the University at Albany. Their application was courteously received by the father of the deceased, but, he replied, that the *notes* were not in a fit condition for publication, as they had never been written out.

THE Pomological matter in this number, in one shape or other, has extended itself to unreasonable limits; but the articles are generally of great interest, and will there-

fore be welcomed by most of the readers of the Review.

#### NOTICES.

The Journal of Agriculture.

"THE cheapest and best;" yes, you are right, though you say it yourself, who, etc. I shall not cavil at the expression, for I believe it true, whatever others may have said—and everybody who will read the work, must agree with me, if unprejudiced and disinterested. Let everybody be as patriotic as they may—*cultivate* your own home paper first, support that nobly, and then look abroad, even unto the east, if you will, for further light, and endeavor to procure, not only the *cheapest*, but the *best*. The Journal, with King, Mapes and Bartlett, and their excellent contributors, will furnish you a large amount of the soundest teachings in agricultural matters. All this will be taken as it is, unsolicited, and unbiassed, too, I believe, except by the merits of the work, and rival publications will please take no exceptions to the remarks. Terms, monthly, 50 cts. a year, in advance.

The Horticulturist.

THIS old friend has just made its first visit from the new *hailing-ground*, at Rochester. The colored engraving is beautiful, and gives quite an air to the work, nor will the reader be disappointed by a further progress, beyond the title page, upon which he will be pleased to see the old vignette, of vines and fruits. A rare and rich assortment of excellent articles will greet his advance. Externally some changes have been made, that mark an era, but the quiet, genteel appearance of our old acquaintance is very agreeable to those who might have anticipated a change in this particular, to have accompanied the change in its proprietorship.

Catalogue of Flowers, Plants, and Ferns, observed in the vicinity of Cincinnati. By Joseph Clark. Published by the Western Academy of Natural Sciences: 1852.

THIS is a list of plants that have been actually seen and mostly collected by our old friend, the botanist, Joseph Clark, within a circuit of six miles around our city. To this is added a further list by Robert Buchanan.

These very industrious naturalists have done a good work in the cause of science, for which their successors will feel themselves under great obligations. Such catalogues may not interest the mass of mankind, but to those who may follow, either now, or at any future period, in the same pleasant paths they have trodden, these notes will prove of great value, and will possess a deep interest. To the man of general science, wherever he may be occupied upon the broad field of science, such

data of a local character as are here presented, are of great value in making the general estimate.

Bulletin of the Horticultural Society of Aube, at Troyes, France.

THIS is a quarterly portion of the annual transactions of an active society, to one of whose members I suppose myself indebted for it.

It contains an account of some of the meetings, the papers and discussions, reports of committees appointed to investigate the value of new inventions, and the condition of gardens—modes of trimming and training—the secretary's quarterly report, and finally, a full account of the great September exhibition, at which there were more than 2500 entries. Altogether it represents the society as being a very successfully useful institution.

## Meteorology.

### OBSERVATIONS FOR DECEMBER, BY MR. LEA.

THERE has fallen a greater depth of rain in the present month than in any one month in thirteen years, except June, 1845, and December, 1848, in each of which months 11 inches fell.

The mean depth of rain for the last thirteen years, which has heretofore been about fifty inches, is much reduced by the unprecedented small quantity that fell in 1851, which was but 31.90 inches. According to observations made by Dr. Engelmann, at St. Louis, the average quantity of rain which falls at that city, in twelve years, amounts to only 42 inches, being nearly seven inches less than falls here. The quantity of rain, recorded by Dr. Engelmann, as falling within twenty-four hours at the same place, is quite remarkable; thus he says—"In the last fourteen years, over 6 inches fell once in 1848, between 4 and 5 inches once in 1841, in 1847, and in 1850; and between 3 and 4 inches eight times." At this city we have had over 3 inches in twenty-four hours but three times in twelve years: once 3 inches, July 11, 1846; 3.10 inches, June 28, 1845; and 3.25 inches, September 3, 1845. Over 2 inches is of frequent occurrence.

This has been rather a gloomy month, though not so bad as November was, and seldom cold enough to form ice.

The heat of the sun very rarely reaches 135 degrees. The mean of all these observations on temperature is the medium of the maxima and minima.

I have observed, for many years past, that there is no particular turbulence of the atmosphere here at the equinoctial periods.

Mean temperature of the last twelve years is 13° Centigrade.

It is very seldom that a high wind prevails for twenty-four hours. A very high wind, such as is usually termed a storm, prevailing for twenty-four hours, I have not yet had occasion to place on record. Squalls occur rarely, and seldom last over ten or fifteen minutes. Our climate, in this midland region, is less liable to sudden changes than that east and north of us; and calms and light winds predominate. The storms of the lakes do not reach us.

The vanes do not veer with "light winds," resort is therefore had to the course of smoke.

## METEOROLOGICAL TABLE.

CINCINNATI, DECEMBER, 1852.

THERMON.		WEATHER.			RAIN.	SNOW.	Date.	WINDS, ETC.
Date.	Min.	Max.	Sunrise.	Noon.	Sunset.			
1	30	51	fog, clear	clear	clear	....	1	Calm.
2	32	55	do. ....	do. ....	do. ....	....	2	Calm hazy.
3	39	48	fog, var. .	rain	rain	98	3	Calm hazy; light NW.
4	46	47	cloudy	clear	do.	12	4	Calm; light W. and SW.; calm.
5	45	55	variable	do.	variable	....	5	Calm; light SW. [at night.
6	49	54	rain	rain	cloudy	23	6	Light SW. and S. [brisk W.; squally
7	56	61	do. ....	clear	rain	65	7	Light S.; brisk S.; high S. and SW.;
8	38	49	cloudy	do. ....	clear	....	8	Light S.; calm at eve.
9	36	45	fog, var. .	do. ....	do. ....	....	9	Light S. E.; brisk W.; light W.
10	29	42	variable	do. ....	do. ....	....	10	Light W.
11	28	34	do. ....	cloudy	cloudy	....	11	Light W.
12	27	38	snow	variable	cloudy	45	12	Light SE.
13	34	35	cloudy	clear	clear	....	13	Brisk W.; light W.
14	24	37	variable	variable	do.	....	14	Calm; light SW.; hazy; light NE.
15	24	43	clear	clear	do.	....	15	Light NE.; hazy calm.
16	43	49	rain	rain	rain	217	16	Light SE.; squally at night.
17	31	34	clear	clear	clear	....	17	High SW.
18	27	40	do. ....	do. ....	do. ....	....	18	Light W. and SW. and S.; calm.
19	40	53	do. ....	cloudy	cloudy	....	19	Light S.; brisk S.; light S.
20	34	64	cloudy	do. ....	do. ....	....	20	Light S. and SW.; light NW.
21	33	36	do. ....	do. ....	do. ....	....	21	Light N.
22	30	37	fog, cl'dy	clear	clear	....	22	Light NE.; calm at eve.
23	44	56	rain	rain	rain	185	23	Light SE.; heavy thunder. [var.; calm.
24	43	60	cl'dy, rain	cloudy	cloudy	28	24	Light S.; brisk SW.; high NW.; light
25	36	45	cloudy	do. ....	cl'y, rain.	19	25	Calm; light NE.; calm.
26	29	38	clear	clear	clear	....	26	Light W. and SW. and W.; calm.
27	37	56	cloudy	rain	var., rain	214	27	Light SE.; brisk SE. & S.; high at times.
28	26	30	do. ....	clear	clear	....	28	High SW. and W.; light at eve.
29	23	38	clear	do. ....	do. ....	....	29	Calm; light SW.
30	38	47	rain	variable	variable	18	30	Light S.
31	44	51	do. ....	rain	rain	1.02	31	Light S.; calm; light W.
Rain and snow water, inches,							9.84	45
								31

## REMARKS.

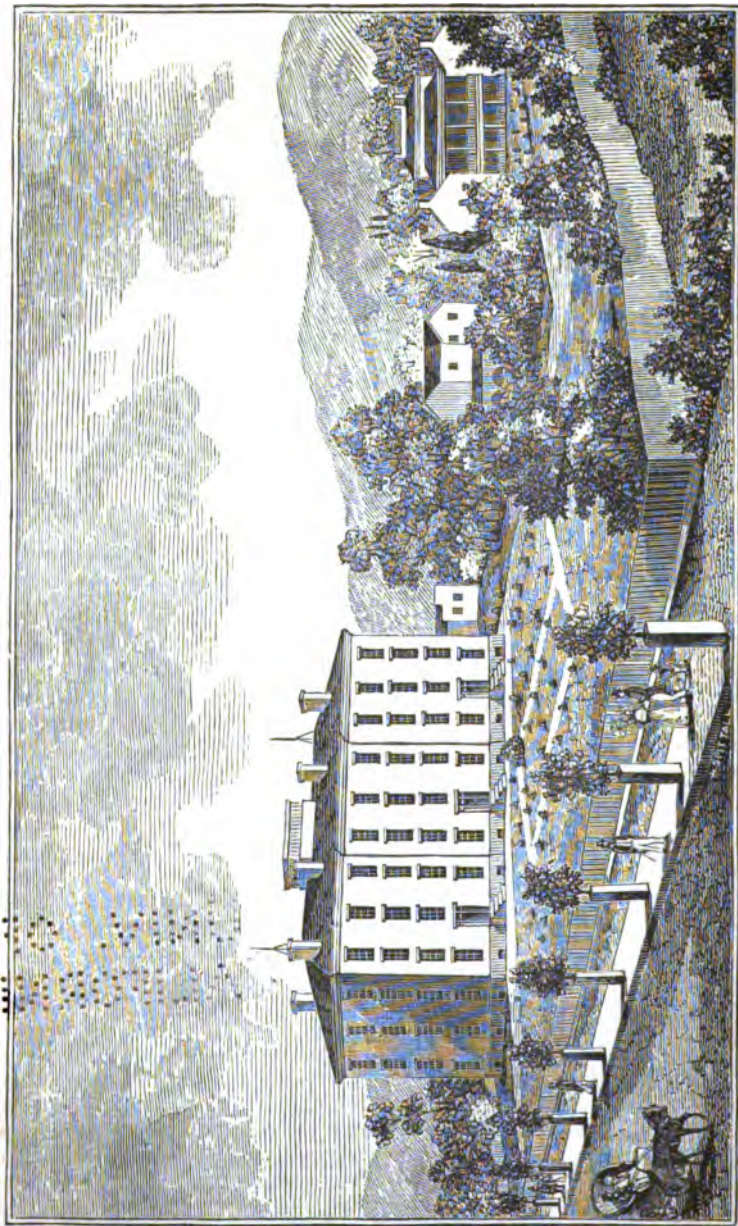
Lowest temperature, .....	23-00	Range of the year 1852, 106.
Highest temperature, .....	64-00	Clear days in the year, .....
Range, .....	41-00	Variable—sun visible, .....
Mean temperature of the month, .....	40-73	Cloudy—sun not visible, .....
do. do. December, 1851, .....	30-86	
do. do. do. 1850, .....	35-17	
do. do. do. 1849, .....	32-10	Mean temperature of 1852, .....
do. do. do. 1848, .....	42-14	Mean temperature for the last twelve years, ....
do. do. do. 1847, .....	35-23	Snow in the year, (four-fifths of which fell in
do. do. do. 1846, .....	40-57	January, .....
do. do. do. 1845, .....	27-55	Rain and snow water 1852, .....
Do. do. do. 1844, .....	40-87	Mean of rain and snow water for the last
Do. do. do. 1843, .....	32-92	thirteen years, .....
Mean temperature of the above ten months, ....	35-81	Mean depth of snow for the last thirteen years, 19-70 in.
The maximum temperature occurred on the morning		The highest temperature I have recorded in
of the 20th, 24th, and 28th.		fourteen years, is .....
Greatest change in twenty-four hours, .....	31-00	The lowest temperature, (19th and 10th of
Highest temperature of the year in July, 98 above.		January, 1852,) is .....
Lowest temperature of the year in January, 10 below.		

JOHN LEA.



Univ. of  
California

1870



Western Baptist Theological Seminary.

COVINGTON, KY.



Vol. III.

MARCH, 1853.

No. 6.

## Vegetable Physiology.

### GOODRICH'S CULTURE OF THE POTATO.

#### REPORT OF THE COMMITTEE.

WHEN at Utica, last September, attending the state fair, one of the most interesting objects in the extensive tent devoted to vegetables, was the collection of healthful, handsome tubers of this important esculent, which has suffered so much from the effects of disease in past years, as to have attracted the attention of some of the best minds of our country.

Among the many essays which have appeared, none have furnished more valuable practical information, than the report of a committee appointed to examine the experiments of Mr. C. E. GOODRICH, with additional remarks and explanations by that gentleman himself. It appears in the valuable Transactions of the New York State Agricultural Society, page 365, and has also been received in pamphlet form through the kindness of the author.

Mr. G. assumes certain propositions previously presented, and gives the following valuable information :—

1. The immediate cause of the potato disease, is sudden alterations of weather, occurring at critical periods in the growth of the plant.

2. The remote cause is the exhausted energy of nearly the whole species cultivated in Europe and the United States.

Since the first conception of these sentiments in 1846, to the present hour, they have been almost constantly before my mind, while engaged in the cultivation of a market garden of from fifteen to twenty acres, embracing from three to six acres of potatoes annually.

Other theories of disease have been before my mind, but continued and varied observation constrains me to adhere to the doctrines of these two original propositions, as well as to most of the illustrations by which they were originally enforced. I have noticed numerous facts and sentiments, leading in the direction of these propositions, and published as new during the last two or three years, all of which are noticed and discussed in the first two essays above noticed. It is not my wish to go over the ground of those essays, but merely to state new facts and illustrations bearing on the same great points, and usually corroborative of them.

There is the more necessity for doing this since the disease has assumed a form somewhat new in my experience, though I suppose not new in other parts of the country, where the climate has been somewhat different. This new phase of disease is its obvious connection with *hot and wet weather*, instead of that which was *cold, wet and windy, alternating with that which was hot and dry*. This phase of disease was alluded to theoretically in the Transactions for 1847, pp. 444 and 445, and in those of 1848, pp. 423 and 424. But it could not there be practically described, as it is in this paper, since at that time it had not been practically experienced.

I. THE NATURAL HISTORY OF THE POTATO.—This subject is treated at some length, in the Transactions for 1847, as before referred to. I here add some further facts:

A friend of the writer spent some time at Bogota, a city of New Grenada, situate upon the mountains, 8,500 feet above the sea, 5° of north latitude. During his residence there in 1847 and 1848, he found the climate free from frost through the whole year; the thermometer never rises above 84°, nor sinks to the freezing point, nor does it ever vary more than 5° in any one day. There he found, as Humboldt had more than forty years before, potatoes of the very best quality. The climate was found too cool for melons, and many other tropical plants, which were brought on mules from warmer regions, lower down the side of the mountains. Here too, many species of plants, as some varieties of peppers and cabbage, never cease growing. It is hence, obvious that *the potato loves a cool, uniform and long season*, the very reverse of what it finds here, where we frequently have a *hot, unsteady and short season*. Nothing but the greatest constitutional vigor could ever here have sustained the potato in a prosperous growth, in the same soil and climate that produces melons, tomatoes, corn, egg plants, etc. We see from the foregoing facts, the reason why the potato flourishes in Iceland, and even in Siberia. Wherever it has shortened the season of its growth, and finds a few weeks of summer weather, free from frost, there it will mature a crop. We see too, why, in this climate, the potato does best in elevated and even mountainous districts, where it finds a cool position, and moist, mucky soil.

II. THE TWOFOLD SYMPATHY OF THE POTATO.—1, As a simply tropical plant, it requires like most of its class, *steady and uniform weather, but less heat than most of its associates*. It fears not only frost, but all sudden and extreme changes. From such changes, I think, most of the disease occurring in my experience before 1850 arose. 2, As a mountain tropical plant, it will not only bear, but *requires, for its best development, more air, moisture and coolness, than most other tropical plants*. The nasturtium, however, is found growing on the mountains of South America, in company with the potato, beyond the limits of all other cultivation. Exactly in harmony with these facts, the nasturtium will grow, both in England and the United States, in cooler positions than any other tropical plant, except the potato. The potato, in these respects, sympathizes with our common hardy plants. The damp and hot weather that injures grapes, plums and gooseberries by mildew, that rusts wheat, and that rots cabbage and turnips, will, at the same time, mildew the potato.

III. THE WEATHER OF 1851.—As the potato disease is ruled by the weather, so it seems in order first to speak of it. The season, as a whole, was wet, from frequent and often heavy rains, and a state of things very different from that which existed in other and more remote parts of the country. It was also unusually steady, without those sudden changes and cold chills that characterize our climate in most years. *May*, and the first half of *June*, were, as a whole, dark, damp and cool, and so unfavorable to tropical plants in general, but not so to the potato. The last half of *June* and all of *July* were hot, damp and often excessively wet, the showers being intermitted with burning hot sunshine. *August* was cool, with few warm days, too cool indeed, for the prosperity of common tropical plants, but favorable to the potato. *September* was warm to the middle of the month, the only thing which saved the corn crop, which had suffered from the wetness of June and July, and the coolness of August.

IV. DISEASE OF THE POTATO, A GENERAL VIEW.—According to Loudon, it is now one hundred, and according to some other writers, it is one hundred and fifty years since the potato began to be cultivated as a common field crop. In the absence of exact

historical dates, we have no very certain or definite account of potato disease until within the last few years. It has been referred to various causes :

1st. Insects, worms, etc.—But unfortunately it happens, that though the potato, like other plants, has its natural enemies, from some of which it has at times suffered considerably, no one class of insects has yet been discovered, whose ravages have been of a nature and extent sufficient to produce the disease in the form in which it has appeared. But admit the extent of injury claimed for insects, yet *the existing disease is not occasioned by their ravages, because clearly it is occasioned by another cause, adequate to its production, just in this form ;* and where different varieties have been planted side by side, a portion of the varieties have been diseased and another portion not. This result has followed regularly, year by year ; a fact quite inconsistent with the idea that it is occasioned by an insect.

2d. Deficient soil.—But the disease often invades new soils of the most faultless character ; nay, in this case as in the preceding, one variety has exhibited disease and one not, during the same year, and in the same circumstances of culture.

3d. Fungus, mold or mildew.—This theory is doubtless partly true, but not true in the sense in which I have usually understood it to be explained. The mildew, so far from being the originating cause of the disease, is as I suppose, but the result and proof of pre-existing causes, arising from the action of the weather on the constitutional weakness of the plant.

4th. Exhausted energy and consequent exposure is suggested as the true explanation of the disease in every case. This theory exhibits two aspects :

*First Aspect of Disease.*—In this case, cold, wet and windy weather, following that which was hot, dry and stimulating, seems to paralyze and deprave the circulation of the plant. Thus chemical changes overcome vital energies ; besides this, the action of the wind lacerates the foliage in many cases. On the return of warm weather, especially if it be sudden, the action of both sun and wind dries up the injured foliage before the exhausted circulation can be restored from the root, which, partaking of the general torpor of the plant and secluded

from the action of the atmosphere by the wetness of the soil, had nearly lost its action. The injury of such a chill is seen to be partly mechanical and partly chemical, and to be closely analogous to that which takes place with all vegetation under the permanent dark and damp chills of autumn. It is also not unlike the injury of hotbed plants removed too early and without due preparation. The proofs of such a morbid condition of the potato, thus theoretically stated, will now be exhibited.

a. A pallid appearance of the leaves, and often a slightly crumpled state of their edges.—There is a loss of that intense verdure that characterizes the potato in a state of high and healthful growth. The hue becomes yellowish, and sometimes reddish green. It is such a change however as does not strike a careless observer. This change of color is undoubtedly in all cases the first and leading indication of disease, and one that becomes a key to all the rest. It is seen in many cases before the chill passes off, and always within two or three days after. No one can doubt that this appearance indicates a bad state both of circulation and elaboration, on both of which economies the health not only, but the life also of a plant depends.

b. Wilted leaves and falling flowers.—Speedily after the change of color just noticed, the top or youngest leaf of the plant withers. It is usually but a part of the rosette of leaves that crowns the plant that thus wilts. The flowers also, whether open or not, fall off without forming any balls. The stems of the flowers break off at the natural joint, a half inch below, through mere starvation.

c. A blue color on the point and edges of the upper and outer leaves particularly, and a yellow iron rust look on the lower and inner leaves.—Can any one doubt that these marks indicate the formation of an acid in the leaf of the potato in cool weather, in June and July, any more than that whole forests of trees should exhibit the same appearances under the permanently damp, cool and dark weather of September. These indications follow closely upon the falling flowers and wilted leaf, and progress more or less rapidly, according to the severity of the chill. Sometimes, on any given day, you will find scarcely a discolored

leaf, and then in three or four days a whole field will be discolored by them. These indications end in the speedy death of the whole leaf, the whole of the three indications (*a*, *b*, *c*,) acting almost with the speed of frost. At other times these indications are scattering, and act slowly. In such a case, they soon disappear, and the crop recovers and grows on. In a few cases, the vines also speedily die after the fall of the leaves. But more commonly they do not, but struggle awhile to live without leaves, and eventually die of starvation.

*d*. Decay of tubers.—If the preceding signs of disease are very violent, the tubers are rarely injured, whether they are one-quarter or even three quarters grown. But if its progress is slower, and the foliage dies a lingering death, the tubers are sure to be affected by rot.

Just as often as severe chills in the middle of summer occur, so often will many or most of the old varieties exhibit these signs of disease, provided they recovered from the first attack. In reference to the foregoing signs of disease, I now ask, is the disease of the tubers a mystery? And is there any mystery in the exhibition of such signs of disease, coming, as always and only they do, in connection with a chill.

*Second Aspect of Disease.*—This seems to arise from hot and wet weather, intermitted, in many cases, with calm, bright and scalding sunshine. This engorges the plant beyond its powers of healthful elaboration. The constantly wet state of the soil hinders the action of the atmosphere upon it, and so enhances the previous difficulty. The cuticle of the whole plant, the leaf especially, formed amid such circumstances—circumstances akin to the condition of a hot-bed plant, with too much heat and water, and too little air,—the cuticle, I say, thus formed, is necessarily tender. Then the hot sun, acting on the plant with its juices thus diseased, and its cuticle thus tender, greatly injures it. The visible morbid indications, arising out of these circumstances, are the following:

*a*. A spotted and livid appearance of the leaves, sometimes interspersed with the pale aspect, (noticed above,) and giving the leaves of the plant an appearance of irregular patch work.

*b*. The withered leaf and falling flower,

also appear, but much less than in the first aspect. The flowers, especially, fall much less speedily than in that case, and only after being fully and for a considerable time expanded. Strong varieties indeed, in this state of weather, set seed balls freely.

*c*. Steel-blue tips on the upper leaves, and iron rust stains on the inner and lower ones appear as before, but less frequently.

*d*. Mold or mildew.—This is the one mark of disease, in this second aspect of it, that rivets the attention. It breaks out everywhere upon the plant: 1, Upon the leaves, beginning in the dark, livid spots, and spreading like a contagious cuticular affection upon an animal, until it destroys the whole leaf. This mark is obviously a parasitic fungus which feeds on the depraved juices of the plant. 2, On the stems, especially two or three inches from the upper extremities of the plant. In this case it destroys the whole cuticle, but in moderate cases does not destroy the stem, whose internal circulation yet continues. The stem above this point is as green as before, and frequently is broken partly off by the wind, hangs down and continues to grow. 3, The flower stems also become affected with mildew, frequently, but not always dying. Often the balls, formed and forming, continue to grow. 4, The balls, whether small or full grown, are seized, if small, with mildew, if full grown, with a brown appearance which pervades the whole structure, just as in the case of melons, tomatoes and egg plants noticed in my former essays on this subject, (see Transactions for 1847, p. 442, 443.) Those full grown balls do not usually rot, but continue firm and unnaturally hard. On one of my South American varieties I had nearly one bushel of balls in this condition, amounting to about one-fourth of the crop of balls. The balls that set late, on all sorts after the season of mildew passed away, set and matured without an attack of this sort.

*e*. The tubers, so far as my experience goes, in 1850 and 1851, are less likely to be diseased than under the first aspect of disease. Disease also comes upon them, I think, while as yet the mildew has made very little development.

Here, as in the first aspect of disease, the strongest varieties suffer least; some of my home seedlings, and most of my foreign sorts scarcely at all. Here also, if the first

attack is light, the plant recovers and continues to grow, but may, in fitting weather, suffer a second attack. Unfavorable weather may be of that mixed character, that the two aspects of disease shall be mingled more or less. Indeed, they obviously are not very different, each having many of the same indications, and each being the result of severities of weather.

*Observations on both aspects of disease.—*

1. The first aspect of disease alone prevailed previously to 1850; the second has been noticed mainly and almost exclusively in 1850 and 1851. I make this remark with much diffidence. The field is wide and mainly untrodden, and may need renewed observation in coming years.

The preceding description of disease has cost me much time and observation, and is made with the consciousness that I have reported the indications of nature as wisely and truly as I was able.

2. The months of June and July, particularly from the 25th of June to the 20th of July, is the season when the potato is most likely to be diseased. That is the season when the changes of weather are most sudden, and when the potato exhibits the largest quantity of foliage, and in the most tender and susceptible condition. Those who judge of potato disease mostly from the indications on the tuber, will not ordinarily find it until a much later period.

3. These two aspects of disease are seen to be in exact sympathy with the twofold sympathy of the potato. (See above in No. II.) The first aspect of disease is suffered in common with most other tropicals cultivated in this climate. This point is fully illustrated in the Transactions for 1847, pp. 442-444, and for 1848, pp. 411-414. So the second aspect of disease is suffered in common with many hardy plants and fruits, such as plums, gooseberries, walnuts, apples, etc., and some vegetables, as carrots, turnips and cabbage.

V. ACTUAL OCCURRENCE OF DISEASE IN 1851.—June 28th. Potatoes have now been up about one month. Noticed today withered leaves and falling flowers, on some sorts got from Buffalo, and others from near New York city, and also in the old early pink-eye.

June 30th.—Saw a few steel-blue tips on the leaves of some of the weaker sorts. The weather for two weeks has been damp and

hot. Plums are rotting badly. Gooseberries and peaches are scalding on the sun side.

July 3d.—Most ordinary varieties are now dropping their flowers, whether open or not. Potato disease reported at Portsmouth.

July 7th.—Weather still damp and hot. Some foreign sorts, received this year, are setting balls very freely.

July 23d.—Color of foliage has long been bad. It now exhibits a pale sickly green, intermingled with dark livid spots. Blue tips are now abundant on feeble sorts.

Saw the first mildew today. It occurred on varieties from the western part of the state, in a position where they were planted rather closely and grew luxuriantly. Saw many mildewed leaves in the field of a neighbor. This exhibition of mildew is four weeks later than last year, exactly in harmony with the relative commencement of hot and wet weather, which began in 1850, July 14th, in 1851, June 14th. Diseased potatoes first seen in the Utica market today.

July 23d to 30th.—Balls setting quite freely on some foreign sorts, on the seedlings derived from them, and on some of my home seedlings.

July 25th.—Hot, wet weather. Potatoes closely planted and falling down badly, present many yellow leaves, dying and dead in the center of the plant.

July 26th.—Found one diseased tuber. Potato disease reported in Ireland.

July 28th.—Hot and wet weather, with severe, scorching sunshine. The aspect of the foliage very bad. Mildew, first seen on the 23d, is now everywhere apparent on all the old varieties, and usually in proportion as they are close planted and have grown luxuriantly. These indications are scarcely seen in my best foreign sorts and home seedlings.

July 29th.—Noticed that, in extreme cases, the mildew extends to every part of the plant, stems, leaves, flowers and balls. Considering the engorged state of the plant, after three weeks of continuous hot, wet weather, intermingled with hot, burning sunshine, one can not but fear the worst consequences to the potato crop. The progress of the mildew is very rapid.

July 31st.—Three days of cooler weather, without rain, produces a little check to the progress of mildew. The diseased leaves



are sloughing off, while its progress is often arrested on a single leaf, the diseased part falling off, and the remainder continuing green. The dryer and cooler state of the atmosphere seems to have strengthened the cuticle, and allowed the engorged juices to dissipate, thus removing the cause of mildew.

August being mostly a cool, dry month, was favorable to the health of the potato, especially as a means of checking the progress of mildew.

August 13th.—The foliage of my ordinary field crops is nearly all brown. The cool weather of the last two weeks has undoubtedly saved the potato crop in central New York. Indeed, I think that one week's continuance of such weather as had for some time been in existence previously to July 27th, would have destroyed all common varieties of potatoes, root and branch.

August 15th to 19th.—Seed balls are setting very freely. Many sorts, as the yam potato, and some both of my home and foreign seedlings, that had refused to set during the continuance of the mildew, are now setting freely. As most of these varieties had manifested great permanence of flowers, the failure to set fruit, undoubtedly arose from want of sufficient dryness in the air, for the delicate operation of fructification. That this failure to set seed balls did not arise from weakness, is evident from another most remarkable fact. The flower stems, even the small ones that had shed single flowers, subsequently turned to leaf-stems, and grew in some instances from six to ten inches in length; and where this was not the case, they became covered with leaves; these leaves and stems were doubtless the result of those juices originally elaborated for the support of the seed balls, which failed of setting. In the case of old and feeble varieties, the flowers usually fell while yet in the bud, and the very stems on which they grew, often withered from weakness, or were dwarfed.

VI. RESULTS OF THE SEASON.—1. My foreign sorts generally, except some imported this year, in a shriveled and feeble state, have substantially resisted the mildew, and even in this excepted case, they recovered, set more fruit, and were eventually killed by the frost. My seedlings, also, both home and foreign, were generally but little injured.

2. I have seen no single hill of potatoes this year, entirely exempt from mildew; although I had many on which a careless and ignorant observer would have noticed no signs of disease.

3. The seed balls of this year have, in many cases been very large, in one case, the larger balls weighing one-half ounce each.

4. Fruit generally has been injured.—Plums, on my sandy soil, have been a failing crop, though setting abundantly, and also protected from the curculio. They rotted when two-thirds grown, partly after and partly before the untimely fall of the leaf. The Elfrey, Damson, Prince's Imperial Gage, and the Yellow Gage, all did tolerably well, and in the order here indicated, but most other sorts failed almost entirely. My neighbors, who had plums on heavy clay soil, were much more successful. Grapes failed exactly as plums did.\* Gooseberries and peaches were both injured by a sun scald on the sun side of the fruit. Apples.—Many varieties were spotted and dwarfed, worse than I ever knew the same sorts to be before. Others were not sound, and showed a disposition to rot, as I have never known the same sorts to do before. Walnuts, both shag-bark and black, were very poor, the meat being either shriveled or bad in flavor.

5. Tropical plants were injured the first half of June by the coolness of the weather. During the long season of mildew they suffered, not however I think from that cause, but from profuse rain. The ripening fruit was injured in August by the general coolness of the weather.

6. From all the foregoing considerations combined, I conclude that the weather of 1851 was peculiarly unfavorable to the health of the potato, and would have been so had it occurred fifty years ago. The timely cool, dry weather of August saved the crop from much rot, but as the vines were already dying, the crop has been light from the smallness of the tuber. The foli-

\* No one who watched the progress and appearance of mildew on the wood and leaf of the grape can doubt that its cause was one with the potato disease. The unnatural hardness and the brown tinge of the berry of the grape, without and within corresponded exactly moreover with the similar appearance of the potato ball this year, and with that of diseased melons and tomatoes in former years.



age of the crop in Oneida county was generally all dead by the middle of August.

7. In parts of our country where the season was dry and hot, or dry and cool, the preceding suffering of the potato crop was not, of course felt, and will scarcely be appreciated.

Mr. G., under his assumed proposition, No. 2, that "The remote cause is the exhausted energy of nearly the whole species cultivated in Europe and in the United States," has gone to work industriously to propagate new varieties from seed of foreign and domestic sorts. Of these the committee find him cultivating 240, variously classified, some of which he rejects from time to time, as unworthy of further attention. Thus his "home seedlings" are reduced from 160 to 65. The striking characteristic of all, is their apparently increased vigor, and greater production of flowers and seeds, at the same period of the season when fields of the common varieties were destitute of verdure. The success attendant upon Mr. G.'s first experiments induced him to sow seed from these, in order to ascertain whether the improvement would be progressive. Of this the committee say—

Having been able to ripen two seed balls on the seedlings of 1849, one of them upon his choicest variety, and the other upon a sort of inferior health; they were planted in his usual manner, and produced severally seventeen and eight plants, which were set, the former in eight, and the latter in four hills. It is upon this experiment that we think a higher interest concentrates than any other upon which Mr. Goodrich is engaged.

Here are twelve hills in the second stage of reproduction, all of them green and large in foliage, but the eight hills greener and larger than the four, in exact correspondence with the health of their parentage. To see the twelve, and especially the eight hills of seedlings, whose seed was sown exactly five months before, with vines, the most of them of the largest size, and covered with flowers, and exhibiting the verdure of June,

while some of the tubers were actually bursting from the soil, and of eatable size, was indeed a rare sight. We think that no higher proof is needful or possible of the susceptibility of the potato of restoration to its original vigor, by careful reproductions, than is here presented.

In conclusion, we can not but consider these experiments not only as being in the highest degree hopeful, but as perfectly settling the question,—can the potato be restored by the wise importation of sorts from lands where it is indigenous, and also by the seedlings derived from such sorts? We consider the evidence equally perfect that it can be restored by a process of repeated and wise reproduction from the best old existing varieties.

Mr. G. does not believe in acclimation.—

The impression is wide spread that tender tropical plants can be gradually carried northward, and hardened to the climate until they will bear frost, and flourish there much as in their native clime. The whole impression is erroneous. Tropical plants may shorten the period of their maturity, and a few probably may be budded or grafted on hardy northern varieties that are nearly related, and thus they may be a little strengthened. But this is the utmost that can be done. The fact that our summers are, while they last, nearly as hot as tropical ones, is the only reason why we can cultivate such plants as corn, cucumbers, melons, pumpkins, squashes, tomatos, etc. But no one of these bears frost now, or matures good fruit in a short, cool, or wet season, any better than the first year they were introduced. Nay, some species of southern plants, when first introduced, possess a vigor which they afterwards lose.

My Bogota potatoes, imported in 1848, bear the high dry heats, the wet chills, the lacerating winds, the sudden changes of this climate, better than any of our old varieties. But they require a long season to mature their tubers, and four years of cultivation have done nothing, or at least little to shorten it. Nothing, I think, but reproduction from the seed ball will shorten them, or any plant similarly situated. One reproduction has already shortened the period of maturity in this variety, but not sufficiently. A second reproduction will, I hope, shorten them

to the requirements of our climate. As the potato is a mountainous plant, cultivated over a wide extent of latitude, so it is possible among numerous importations, to find some whose period of maturity will be found exactly fitted to our own climate. This has been in my experience.

He gives some practical directions as to the mode of securing the best tubers for seed.

Besides the frequent renewal of the potato from the seed ball, a thing never long to be neglected, something may be done to continue the vigor of existing valuable varieties.

Let every cultivator plant a small plat for seed in good medium soil and fair exposure. Thus he will be likely to secure tubers of the highest health.

For ordinary winter stores such seed may be planted in somewhat richer soil. The forcing of it by a richer cultivation, for one season, will not be likely to enfeeble it sufficiently to disease it much, while the crop may be large.

Another portion of seed may be planted in very rich soil, where it may yield a very heavy crop for early market; but it will be likely to be sold and eaten before any morbid tendencies, which such a course of cultivation might produce, would be likely to develop. Neither of these last should be used for seed.

With regard to antidotes, he considers them of little avail. He has used sulphur, lime, unleached ashes, and plaster of Paris, applied when the dew was on the leaves. "The application had no perceptible influence either for good or evil to the crop."

He finds no difference of results in the use of small potatoes for seed. Theoretically opposed to such a course, he thinks an occasional use of small tubers, especially where you do not save the crop for seed next year, is entirely safe, leading neither to disease nor diminution of crop.

He considers the increased liability of the potato to disease in late years, is *exhausted energy*, resulting from long cultivation by means of tubers, instead of occasional re-

production from the seed balls. Manuring for the purpose of obtaining large crops has made the plant more vascular, as well as overworked its excitability. He wisely adds, "The proofs of these positions formerly adduced, were largely inferential and collateral. The remedy was also of the same character—reproduction from our hardiest sorts, reimportation from its native clime, and reproduction from such imported sorts."

Altogether, this essay is possessed of deep interest to the farmer and physiologist. While all were groping in the dark, vainly trying empirical applications of a topical character, with little or no guide for such application, or indulging in long extended theories, claiming the slenderest foundation, Mr. Goodrich has happily struck a thought, which, though based perhaps upon false premises, and itself untenable, has suggested to his philosophic mind a means for substituting a new, healthy, vigorous set of plants, in lieu of those which he assumes to be possessed of "exhausted energies."

Since writing the above, I have received another pamphlet, being the same that appeared in the Transactions of the New York Agricultural Society for 1848; and a letter also, from the author, in which he refers to the different essays upon the potato disease. He also forwarded me very kindly an extract from a newspaper published in Utica, which contains in a condensed form, his views upon this interesting subject. The latter I have endeavored to have reproduced in some of our own papers.

Mr. Goodrich, owing to ill health, has devoted some years to the cultivation of a market garden in the neighborhood of Utica; upon which he has carried on his experiments, which he has conducted with a philanthropic object, rather than as a matter of speculation. Hence he desires

that the principles involved may be widely tested, and that his new varieties and seeds may be extensively tried throughout the country.

In the pamphlet, he refers to the influences that might tend to effect injuriously tropical plants, when removed to our climate. Among these he assigns an important rôle to sudden alterations of the weather and its coolness, as noticed in 1848—illustrated by the injury sustained by several varieties of plants. From these observations he draws the following inference: "That the state of the weather which in this climate usually precedes potato disease, simultaneously, similarly, and almost equally, precedes a diseased condition in every other tropical plant usually cultivated among us; and that therefore it is as rational to talk of melon, cucumber, or tomato disease, as of the potato disease."

His second proposition is, that "the remote cause of the potato disease is the exhausted energy of nearly the whole species cultivated in Europe and in the United States." The proof of this proposition he considers quite as important as that of the former, since upon it will depend the character of remedial efforts. The assumption that the affection is like cholera, which has been made by others, puts an end to all effort to arrest it; as we must simply wait until it passes. If, however, as he suggests, it be open to our scrutiny, we may hope that the disease and its remedy may be ascertained on rational facts and principles.

He assumes that "the disease is still obviously connected with variable weather;" such being different from the normal condition of an elevated mountain climate in a tropical region. Moreover, our irregular seasons accompany an exaggerated form and extent of the disease, while regular

and even summers present less of the affection. He also says, "it is modified by improvement in culture and soil." This argument he sustains by some very good logic and reference to observations; but I am not prepared to admit that good care and culture should enfeeble any plant, or render it more subject to disease than neglect.

The *non-production of proper seed* is cited by our author as a further evidence of depraved health, which may have weight in this case. But how is it with most other plants? Do we not find it an established law, that whatever threatens the life of an individual always stimulates it to renewed and increased efforts at reproduction of the species by *seed*? This is constantly observed in our sick peach-trees, in our dis-barked apples and pears, and in limbs of trees and vines that have had the ringing operation performed upon them. Moreover, the potato is one of those plants that has been wisely constituted so that other means of extension are provided, much better adapted for man's use than *proper seed*.

The author must be granted the benefit of his summing up, which is here condensed from the Appendix. He considers that he has established the following points:—1. That the immediate cause of the disease is an infelicity of the weather. 2. That the remote cause of the disease is exhausted energy, chargeable to continued cultivation from tubers, to excessive cultivation, and to incongeniality of climate. 3. That the disease acts in a chemical and in a mechanical manner. 4. That the proper mode of studying the disease is to investigate the natural history of the potato and tropical plants, especially in regard to climate. 5. That this is not a disease peculiar to the potato, but incident to all our tropical plants

usually cultivated in this climate. 6. That the *immediate remedy* is to furnish a high and cool position; a free soil, of moderate fertility, rather moist than dry; the use of the strongest varieties; early and deep planting, frequent, deep cultivation, and preservation of the tubers in a moderate moisture and low uniform temperature through the winter. 7. That the *complete remedy* involves nothing short of the complete regeneration of the race by seeds in their highest condition of vitality; the product treated as suggested in No. 6, and renewed from the seed balls occasionally or every few years.

As before observed, the conclusion—the plan of producing new healthy varieties from seed—does indeed promise the most favorable results; and all who are at all interested in the great result so confidently anticipated by Mr. Goodrich, are recommended to aid him in pursuing the investigation, by procuring some of his superior varieties, such as he has advertised for sale, and then continuing the experiment suggested.

Others than Mr. G. have for some years been engaged in raising varieties from seed, and many excellent new kinds are to be found in many parts of the country; all of which, however, are presumed to be seedlings from our old varieties. Those exhibited at the Indiana State Fair last year, were very promising, and some of medium size were the produce of one season from the seed.

#### The new Water-Weed.

(*Anacharis alinastrum*.)

THE Fenn country, in England, has been invaded from the United States, by the power of a vegetable production, that is fast filling the waters in various parts of the country with its obnoxious presence. The whole stock seems to consist only of female specimens; consequently, though it can not seed, its wonderful powers of repro-

duction from detached portions fully make up for the deficiency. Many instances are given in the work, of its annoyance to watermen; the obstructed state of the river Cam; the complaint of the sluice-keepers, that it gets into their pens, and other damages.

The weed is traced from Rugby to the Severn, the Thames, the Nene, the Ouse, the Welland, the Trent, and the Humber; and from a tub in the Cambridge Botanical Garden into the river Cam. How it got to Rugby is uncertain, but the following ingenious conjecture of Mr. Marshall is striking:

"In North America the timber is floated in rafts down the rivers, in which case fragments of the American weed would cling to it, or seeds might find their way into the clefts of the wood, and if but one seed, or one fragment retained its vitality, in some moist cranny, till it reached its final destination, I believe it would be sufficient to account for the myriads of individuals that now exist in England. Indeed, from the circumstances of all the plants hitherto found being of one sex, the hypothesis of its propagation from a single seed or fragment is rendered more probable than by supposing a number of seeds or fragments to have been imported."

I find Dr. Lindley has no doubt that this so-called *Anacharis alinastrum* is the same as the *Anacharis Nuttalli*, of the North American rivers.—*E. Sanders, English correspondent of American Gard. Chron.*

#### Roots as a Means of Propagation.

As it is a fact, which botanists have clearly demonstrated, that all the organs of plants have an extremely simple origin, and are formed, as it may be said, by a single utricle, which engenders others, among which vessels of different kinds appear; that this mass of utricles proceeds in this manner to constitute, under the vital influence, plants of various forms, adapted for our use and for increasing our enjoyment; since it is the case, I repeat, that all plants originate by a simple and uniform organization, and that many of them naturally multiply by division (segmentation) we may thence conclude that every detached part of a plant, placed under conditions favorable for its preserva-

tion, would reproduce an individual similar to that from which it was taken. Practical experience daily furnishes us with numerous examples in support of this view of the subject.

What does, in fact, the gardener when he cuts off a branch from some plant in order to make it produce roots? Is not the complete separation of the small portion of the plant made with the intention of its becoming an individual similar to that from which it was taken? Do not cuttings and buds afford daily confirmation of these data of vegetable physiology? Is it not the case, that in some plants, *Gloxinias* and *Achimenes*, for example, a leaf or the fragment of a leaf is sufficient to propagate the species? Moreover, is it not known that in some of the *Lily* tribe even a single scale detached from the bulb will produce minute bulbs or shoots from its base: and, finally, one of the scales in some cases may be cut into small pieces, by means of which the gardener can produce several plants.

These examples, which might be easily multiplied, are, I presume, sufficient for the subject I have proposed; and they lead to the conclusion, that, if the above-ground portions of a plant can produce new individuals, so ought likewise the under-ground parts of roots, seeing that they have the same elementary formation. I am convinced that this part of the plant has hitherto been too much neglected as regards propagation, and that in this respect it will become of great importance, when it shall be advantageously employed in the propagation of plants that are found difficult to increase by other modes. It may be employed for producing plants either directly similar to the original, or for furnishing stocks. In the first case, it is sufficient to cut the roots into small pieces and plant them in the natural soil, as is usually done with the *Catalpa*, *Tecoma*, *Paulownia*, *Xanthoxylum*, *Cydonia*, *Azalea*, *Mavhura*, *Gingko*, *Calycanthus*, *Syringa*, *Prunus*, *Morus*, *Guilandina*, *Volkmeria*, *Ailanthus*, *Rhus*, etc.; and in the second, that is, when we wish to raise stock, we must proceed as is done for the *Pæonia*, *Clematis*, *Bignonia*, etc.

The examples which I have cited may be extended to herbaceous plants, such as the *Lobelia* and certain *Anemones*. The *Pæonia officinalis*, etc., make equally good plants

from pieces of the roots, and in my opinion this is the best mode of propagation for these plants. Indeed, certain families, such as the *Campanulaceæ*, *Boraginaceæ*, *Convolvulaceæ*, and the *Ranunculaceæ*, etc., seem to possess this property in a high degree.

In endeavoring to direct the attention of gardeners to the roots as a means of propagating plants, I have the conviction that the certainty of the proceeding will be very advantageous in the propagation of certain plants which refuse to strike from cuttings taken from shoots or branches. If we have great difficulty in so propagating them, it is frequently because the mode employed is not suited to the degenerated or domesticated state into which we have brought them, for we cannot imagine that the Creator, in spreading over the earth innumerable species of plants, intended that they should disappear; but on the contrary we may rest assured that he has given each of them the means of reproduction. These means are the seeds; but as man, always desirous of enjoyment, endeavors to procure new, by transporting into the country which he inherits, plants from a different region, and which are by this frequently rendered sterile, he must submit to the consequences of this transgression of natural laws. The various cares which plants require, and the difficulty which we experience in their propagation, have caused us to have recourse to a part of the plant less subject than the stems and flowers to the influence of climate.

I therefore consider the roots as being peculiarly adapted in most cases, if not in all, for the propagation of plants which will neither produce seeds nor propagate by cuttings of the shoots.—*Revue Horticole*.

#### Plant Antipathies.

*Mr. Editor* :—Noticing in your paper of October 2d, that if sunflowers are planted among thistles, the latter will cease to thrive and will soon die out, I am induced to say a word or two upon a subject that has often arrested my attention. I will first state a few facts, and then make a remark of a general character.

It is an old observation, that barberry bushes will spoil a rye field. I have more than once seen the heads of rye in the immediate vicinity of a barberry bush, as

erect as so many soldiers, while all the heads at a little distance were bowed down with a heavy burden.

A year ago last spring, I had a fine Catawba grape-vine trained on to a wall in a warm place. It was in a bearing condition, and every circumstance promised a good crop. Some tomatos were planted by the wall, that they might have the advantage of the warmth and protection afforded by it. They grew thrifly. Most of the plants were removed, but three fine ones were left, in the immediate vicinity of the grape-vine. They grew there, and yielded any quantity of tomatos. But the grape-vine was at a stand still, all summer. It made but a few inches of wood, and only two or three clusters were produced, and those blighted; not a single grape came to perfection.

Some few years ago, I set out a peach-tree against another part of the same wall, and trained it to the wall; at the distance of some ten feet was a fine Isabella grape, in a bearing state. They both grew finely; I never saw a more thrifty peach-tree. In about two years, the grape-vine, as grape-vines are apt to do, got hold of the doctrine of annexation, and manifested a disposition to embrace in its long arms all that joined it; it shot its feelers about among the limbs of the peach-tree, and in a few weeks its folds, anaconda-like, were entwined around all the branches; but as is often the case in ill-assorted matches, this seeming felicity did not long continue. A few half-grown imperfect grapes only were found among the peach leaves. The next year the vine was suffered to remain in the same condition, as a matter for observation; the result was the same. While the rest of the vine was heavily loaded with fruit, that portion which was supported by the peach-tree yielded few grapes, and none of them perfect.\*

This fall I have had occasion to notice a field of potatos, of perhaps an acre. Tomatos came up plentifully in the spring, having been mixed in the manure. The man was directed, when he hoed the potatos, to

cut up the tomato plants, and to leave only now and then one. But they were very thrifty, and John thought it was too cruel to cut them up, and he had not the heart to see them "kilt" with the hoe, and so many of them were suffered to live. The consequence has been, that there was a great abundance of tomatos, and a very small abundance of potatos, and small potatos at that. In those parts of the field where there were few tomatos left, the potatos yielded a tolerable crop; but where the tomato plants were numerous, the potatos were scarcely worth digging. Now it may be said that the tomatos overshadowed the potatos or exhausted the soil; but this does not explain the matter satisfactorily; for potatos will often yield a good crop among corn, which certainly overshadows them and exhausts the soil to as great a degree. I might mention many similar facts, had I time and space.

My general remark is this. There are many plants that are incompatible with each other. There is an *aura*, an *effluvia*, arising from one plant that operates as a poison upon other plants. One plant will wither and die in the presence of another. Some plants are more highly sensitive than others, and manifest more readily the influence of the neighborhood in which they reside.

Now, Mr. Editor, here is a wide field for observation, and a field which has been but little cultivated. It is important to know, not only what soils are suited to certain crops, but what crops and plants are suited to each other, and what are incompatible with each other. If you were about to settle your boy in business, you would anxiously inquire, by what influences will he be surrounded? Will there be anything to counteract all the good advice you may give him, and all the watchful care you may extend over him. Just so if you are about to set out a favorite tree, or a valuable plant, you should know whether there is any plant in the immediate vicinity that will injure its growth, or prevent its fruit from attaining perfection. We sometimes fail to obtain the results that we expected in horticulture, without being able to assign any satisfactory reason. Perhaps the failure is owing to unfriendly neighbors, who exert a blighting influence upon the character and success of the stranger plant.

\* I have seen the Catawba grape do well on a peach at Springfield, Ohio, and with us the Isabella does best when allowed to run wild over any tree that is nearest.—Ed. W. H. Rev.

The influence of flowers upon each other, and the influence of the colors of surrounding objects, are well known to florists; and those who are engaged in producing varieties and hybrids avail themselves of these influences. If these influences are so manifest in the domains of Flora, why should they not be felt in those of Ceres and Pomona?—*Dr. Joseph Reynolds, in New England Farmer.*

#### Transmutation of Plants.

WE perceive by Hovey's Magazine of Horticulture for September, that the editor has been stirring up the old threadbare topic of the transmutation of plants; and, although he professes a former want of faith in that doctrine, he seems now inclined to think the process has been demonstrated by Mons. Fabre, a French experimental agriculturist. The belief in transmutation is certainly very ancient, perhaps as old as that in transubstantiation; and if we may confide in the evidence furnished by popular tradition, and which is still pertinaciously urged by many cultivators of the soil, the doctrine was fully established long before Mons. Fabre was born. We know that so long ago as the middle of the last century, this belief was so prevalent in Europe, that it was deemed expedient, by the great Swedish naturalist, to demonstrate its fallacy by an elaborate argument,—which was published, under his auspices, in the 5th volume of the *Amoenitates Academicæ*.\* But, of what avail is it, to expose the fallacy of such notions to those who are determined to cherish them?

"He that's convinced against his will,  
Is of the same opinion still."

The belief continues to find comfortable quarters in the minds of scores and hundreds of our agricultural fellow-citizens,—while it laughs to scorn all the arguments,

\* The worthy disciples of this doctrine, in the "good old times," not only believed (with their followers of the present day) that wheat would turn to cheat; but they contended that it would often turn a whole series of somersets; going off first into rye, then from rye into barley; from barley into *lolium* or darnel; from *lolium* into bromus, or cheat; and from cheat into oats. They even thought these vagaries could be inverted, by a good soil: and that, with skillful management, the erratic plant might be made to retrograde toward its pristine state, at least as far back as rye!

drawn from structural botany, that can be directed against it. The advocates of the notion deal altogether in assertions, and a sort of second-hand facts, by which the question is conclusively settled, with *them*. They have all seen, or heard of fields sown with wheat, which produced little else than *cheat*, when the harvest came round; and they very confidently ask, what better proof of conversion can be required? Mr. Hovey tells us, "intelligent cultivators, and men of veracity, have affirmed that such changes have taken place, and have offered to furnish specimens of the transmutations." So we have often read, before; but we never yet saw, nor could find the person that would "furnish specimens." The "specimens" are the very things we want to see.

If, as Mr. Hovey says, Monsieur Fabre "demonstrates, beyond all further question, that wheat is itself a transmutation of a kind of wild grass," it is to be hoped he will let the demonstration do its perfect work, by furnishing us with "specimens" in all the stages of transmutation. As it required seven successive crops to complete the metamorphosis, we would like to have specimens in its aboriginal state of "wild grass,"—and also in the modified condition of each successive year, as it went on approximating to genuine wheat. These would afford very interesting evidence in the case; and as it can no doubt be readily furnished by Mons. Fabre, we shall eagerly expect its arrival, through Mr. Hovey,—pledging our grateful acknowledgments, when it does come, through the Farm Journal.

It appears from the account of this remarkable phenomenon, that the "wild grass" so successfully operated upon by Mons. Fabre, is one to which Linnæus gave the generic name of *Aegilops*,—well known to the botanists of southern Europe. The plant is somewhat allied to *tritium*, or wheat,—and one of the species was actually referred to *tritium*, by Beauvois. The one in question seems to be a variety of *Aegilops ovata*, L., and has been called *triticoïdes*, from its resemblance to wheat.

Travelers, in former times, used to report that wheat grew spontaneously in Sicily. It is now known that they had reference to the *Aegilops ovata*, which is abundant throughout that island; and its grain so much resembles that of wheat, that an ancient bot-

anist (*Casalpinus*, *fide De Theis*) named it, *Triticum sylvestre*. When ripe, this grass is gathered by the Sicilian peasantry, who tie the heads up in bunches, and set them on fire; they burn with rapidity, and so give the grains a slight roasting, which are thus considered agreeable food. Thus much for the plant, in its wild state. Now, everybody knows that long and skillful culture will improve the size and quality of all vegetable products,—and of course the grain of *Aegilops* may be so improved. But we think it yet remains to be shown that culture can essentially change either the generic or the specific character of plants; and until Mons Fabre shall establish the allegation by authentic specimens, showing the transmutation, we must believe—for all analogy, and all our observations compel us to believe—that his new-made wheat is nothing else than real *Aegilops*,—modified or improved, it may be, and probably is, by seven years of careful cultivation,—but still *Aegilops*. D.

WEST CHESTER, Oct. 27, 1852.

—*Farm Journal*.

### Mysteries of Vegetation.

BY PROFESSOR R. HUNT.

FLOWERS have been called the stars of the earth; and certainly, when we examine those beautiful creations, and discover them, analyzing the sunbeams and sending back to the eye the full luxury of colored light, we must confess there is more real appropriateness in the term than even the poet who conceived the delicate thought imagined. . . . How few there are, of even those refined minds to whom flowers are more than a symmetric arrangement of petals harmoniously colored, who think of the secret agencies forever exciting the life which is within their cells, to produce the organized structure; who reflect on the deep, yet divine philosophy which may be read in every leaf—those tongues in trees which tell us of eternal goodness and order? . . .

The flower is regarded as the full development of vegetable growth: and the consideration of its mysteries naturally involves a careful examination of the life of a plant, from the seed placed in the soil to its full maturity, whether it be as herb or tree. It has been said that stones grow—that the

formation of crystals was an analogous process to the formation of a leaf. . . . This is, however, a great error. Stones do not grow. There is no analogy even between the formation of a crystal and the growth of a leaf. All inorganic masses increase in size only by the accretion of particles, layer upon layer, without any chemical change taking place as an essentiality. The sun may shine for ages upon a stone without quickening it into life, changing its constitution, or adding to its mass.

Organic matter consists of arrangements of cells or sacs, and the increase in size is due to the absorption of gaseous matter, through the fine tissue of which they are composed. The gas—a compound of carbon and oxygen—is decomposed by the excitement induced by light; and the solid matter thus obtained is employed in building a new cell, or producing actual growth, a true function of *life*, in all the processes of which matter is constantly undergoing a chemical change. The simplest developments of vegetable life are the formation of conferræ upon water, and of lichens upon the surface of the rock. In chemical constitution, these present no very remarkable differences from the cultivated flower which adorns our garden, or the tree which has risen in its pride amidst the changing seasons of many centuries. Each alike have derived their solid constituents from the atmosphere, and the chemical changes in all are equally dependent upon the powers which have their mysterious origin in the great center of our planetary system. . . .

In the seed cell we find, by minute examination, the embryo of the future plant, carefully preserved in its envelop of starch and gluten. Under favorable conditions, this life-germ may be maintained for centuries. Grains of wheat, which had been found in the hands of an Egyptian mummy, germinated and grew. . . . The process of germination is essentially a chemical one. The seed is placed in the soil, excluded from the light, supplied with a due quantity of moisture, and maintained at a certain temperature, which must be above that at which water freezes. Air must have free access to the seed, which, if placed so deep in the soil as to prevent the fermentation of the atmosphere, never germinates. Under favorable circumstances, the life-quickening



processes begin. The starch, which is a compound of carbon and oxygen, is converted into sugar by the absorption of another equivalent of oxygen from the air. . . The sugar thus formed, furnishes the food to the now living creation, which, in a short period, shoots its first leaves above the soil. And these, which rising from their dark chambers are white, quickly become green under the operations of light.

In the process of germination a species of slow combustion takes place, and as in the chemical processes of animal life, and in those of active ignition, carbonic acid gas, composed of oxygen and charcoal, or carbon, is evolved. Thus by a mystery which our science does not enable us to reach, the spark of life is kindled—life commences its work—the plant grows. The first conditions of vegetable growth are, therefore, singularly similar to those which are found to prevail in the animal economy. The leaf-bud is no sooner above the soil than a new set of conditions begin. The plant takes carbonic acid from the atmosphere, and having, in virtue of its vitality, by the agency of luminous power, decomposed this gas, it retains the carbon and pours forth the oxygen to the air. . . . The plant absorbs carbonic acid from the atmosphere through the under surfaces of the leaves, and the whole of the bark. It at the same time derives an additional portion from the moisture which is taken up by the roots, and conveyed “to the topmost twig” by the force of capillary attraction, and another power called *endosmosis*, which is exerted in a most striking manner by living organic tissues. . . . Independently of the action of light the plant may be regarded as a mere machine. The fluids and gases which it absorbs, pass off in a condition but very little changed—just as water would strain through a sponge or porous stone. The consequence of this is the blanching or *etiolation* of the plant, produced by our artificial treatment of celery and sea-kale; the formation of the carbonaceous compound called *chlorophyle*, which is the green coloring-matter of the leaves being entirely checked in darkness. If such a plant is brought into the light, its dormant powers are awakened, and instead of being little other than a sponge through which fluids circulate, it exerts most remarkable chemi-

cal powers. The carbonic acid of the air and water is decomposed; its charcoal is retained to add to the wood of the plant, and the oxygen is set free again to the atmosphere. In this process is exhibited one of the most beautiful illustrations of the harmony which prevails through all the great phenomena of nature with which we are acquainted—the mutual dependence of the vegetable and animal kingdoms. In the animal economy there is a constant production of carbonic acid, and the beautiful vegetable kingdom, spread over the earth in such infinite variety, requires this carbonic acid for its support. Constantly removing from the air the pernicious agent produced by the animal world, and giving back that oxygen which is required as the life-quickening element by the animal races, the balance of affinities is constantly maintained by the phenomena of vegetable growth.

The decomposition of carbonic acid is directly dependent upon luminous agency. From the impact of the earliest morning ray to the period when the sun reaches the zenith, the excitation of that vegetable vitality by which the chemical change is effected, regularly increases. As the solar orb sinks toward the horizon, the chemical activity diminishes—the sun sets, the action is reduced to its minimum—the plant, in the repose of darkness, passes to that state of rest which is as necessary to the vegetating races as sleep is to the wearied animal.

These are two well marked stages in the life of a plant: germination and vegetation are exerted under different conditions. The time of flowering arrives, and another change occurs; the process of forming the alkaline and acid juices, of producing the oil, wax, and resin, and of secreting those nitrogenous compounds which are found in the seed, are in full activity. Carbonic acid is now evolved and oxygen is retained. Hydrogen and nitrogen are also forced, as it were, into combination with the oxygen and carbon, and altogether new and more complicated operations are in activity.

Such are the phenomena of vegetable life which the researches of our philosophers have developed. This curious order—this regular progression—showing itself at well marked epochs, is now known to be dependent upon solar influences. The

"bright effluence of bright essence increate" works its mysterious wonder on every organic form. Much is still involved in mystery. But to the call of science some strange truths have been made manifest to man, and of some of these the phenomena must now be explained.

*Germination* is a chemical change which takes place most readily in darkness. *Vegetable growth* is due to the secretion of carbon under the agency of light; and the processes of *floriation* are shown to involve some new and compound operations. These three states must be distinctly appreciated. The sunbeam comes to us as a flood of pellucid light, usually colorless. If we disturb this white beam, as by compelling it to pass through a triangular piece of glass, we break it up into colored bands which we call the *spectrum*, in which we have such an order of chromatic rays as are seen in the rainbow of a summer shower. These colored rays are now known to be the sources of all the tints by which nature adorns the surface of the earth, or art imitates, in its desire to create the beautiful. These colored bands have not the same illuminating power, nor do they possess the same heat-giving property. The yellow rays give the most *light*, the red rays have the function of *heat* in the highest degree. Beyond these properties the sunbeam possesses another, which is the power of producing *chemical change*—of effecting those magical results which we witness in the photographic processes, by which the beams illuminating any object are made to delineate it upon the prepared tablet of the artist.

It has been suspected that these three phenomena are not due to the same agency; but that, associated in the sunbeam, we have *light*, producing all the blessings of vision, and throwing the veil of color over all things; *heat* maintaining that temperature over our globe which is necessary to the perfection of living organisms; and a third principle, *actinism*, by which the chemical changes alluded to are effected. We possess the power, by the use of colored media, of separating these principles from each other, and of analyzing their effects. A yellow glass allows *light* to pass through it most freely, but it obstructs *actinism* almost entirely. A deep blue glass, on the contrary, prevents the permeation of *light*,

but it offers no interruption to the *actinic* or chemical rays. A red glass again cuts off most of the rays, except those which have peculiarly a *calorific* or heat-giving power. With this knowledge we proceed in our experiments, and learn some of the mysteries of nature's chemistry. If, above the soil in which the seed is placed, we fix a deep, pure yellow glass, the chemical change which marks germination is prevented. If, on the contrary, we employ a blue one, it is greatly accelerated. Seeds, indeed, placed beneath the soil, covered with a cobalt blue finger-glass, will germinate many days sooner than such as may be exposed to the ordinary influences of sunshine. This proves the necessity of the principle actinism to this first stage of vegetable life. Plants, however, made to grow under the influences of such blue media, present much the same conditions as those which are reared in the dark: they are succulent instead of woody, and have yellow leaves and white stalks. Indeed, the formation of leaves is prevented, and all the vital energy of the plant is exerted in the production of the stalk. The chemical principle of the sun's rays, alone, is not, therefore, sufficient. Remove the plant to the influence of light, as separated from actinism, by the action of yellow media, and wood is formed abundantly; the plant grows most healthfully, and the leaves assume that dark green which belongs to tropical climes or to our most brilliant summers.

Light is thus proved to be the exciting agent in effecting those chemical decompositions which have already been described. But under the influence of isolated light it is found that plants will not flower. When, however, the subject of our experiment is brought under the influence of a red glass, particularly of that variety in which a beautifully pure red is produced by oxide of gold, the whole process of floriation and the perfection of the seed is accomplished.

Careful and long continued observations have proved that in the spring, when the process of germination is most active, the chemical rays are most abundant in the sunbeam. As the summer advances, light, relatively to the other forces, is largely increased. At this season the trees of the forest, the herb of the valley, and the cultivated plants which adorn our dwellings,

are all alike adding to the wood. Autumn comes on, and the heat, so necessary for ripening grain, is found to exist in considerable excess. It is curious, too, that the autumnal heat has properties peculiarly its own—so decidedly distinguished from the ordinary heat, that Sir John Herschel and Mrs. Somerville have adopted a term to distinguish it. The peculiar browning or scorching rays of autumn are called *parathermic* rays. They possess a remarkable chemical action added to their calorific one; and to this is due those complicated phenomena already briefly described. In these experiments, carefully tried, we are enabled to imitate the conditions of nature, and supply at any time those states of solar radiation which belong to the varying seasons of the year.

Such is a very rapid sketch of the mysteries of a flower. "Consider the lilies of the field, how they grow: they toil not, neither do they spin; and yet I say unto

you, Solomon in all his glory was not arrayed like one of these."

Under the influence of the sunbeam, vegetable life is awakened, continued, and completed; a wondrous alchemy is effected. The change in the condition of the solar radiations determines the varying conditions of vegetable vitality; and in its progress those transmutations occur, which at once give beauty to the exterior world, and provide for the animal races the necessary food by which their existence is maintained. The contemplation of influences such as these realizes in the human soul that sweet feeling which, with Keats, finds that,

"A thing of beauty is a joy forever;  
Its loveliness increasing, it will never  
Pass into nothingness, but still will keep  
A bower quiet for us, and a sleep  
Full of sweet dreams, and health, and quiet  
breathing."

"Such the sun and moon,  
Trees old and young, sprouting a shady boon  
For simple sheep; and such are daffodils,  
With the green world they live in."



## Pomology.

### CULTIVATION OF FRUIT.

THE following suggestions were made by M. P. WILDER, at one of those agreeable agricultural meetings held in the legislative hall, Boston, Massachusetts:—

There are three considerations which are absolutely necessary to the successful cultivation of fruit trees, viz:

1. The appropriate soil and location;
2. The proper preparation of the soil; and
3. The judicious selection of varieties.

By the appropriate soil and location, is meant that which is naturally suited to any particular class of fruits. Nearly all our fruits will succeed in a deep mellow loam, but the cherry, the peach, and even some kinds of the apple, will flourish on a soil where the pear will survive but for a short time. Some varieties require a warm soil and southern exposure; others will succeed with a northern aspect, and under less genial influences. Some prosper in the Eastern, Middle and Western States; others only in

one of these regions. But the subject of soils and location occupies so wide a field of research, that we cannot enter upon it at length during this discussion.

In relation to *the proper preparation of the soil*, all intelligent cultivators agree that thorough subsoiling, or trenching, is not only the most judicious system, but in reality the most economical in the end. The first great principle, however, to be attended to, is complete and perfect drainage; for wherever water is permitted to remain, no tree can long continue in health. Stagnant water is as injurious to vegetable life, as the miasma and malaria of pools and marshes to animal life. The drainage must not only be perfect, but its depth must be such as to entirely prevent the roots from reaching beyond it in search of food. This being accomplished, the soil should be thoroughly worked with manure to the depth of fifteen inches at least; and if trenched, the upper soil should be placed at the bottom, and the lower soil on the surface, where it will become disintegrated and prepared by the influences of the atmosphere as food, or can be enriched, as necessity may require. Under such circumstances, the roots of trees will have room to search for nutrition, as wanted, and the loose and friable condition of the soil will enable the atmosphere to permeate through it, and the rains to percolate, and pass off, when too profuse, into the drainage, so that no water can ever remain to injure the roots, the disastrous effects of which on trees are everywhere visible in low moist lands.

For the want of the proper location and preparation of the soil, I am of opinion that more than one-half of all the fruit trees which have been planted in New England for the last twenty-five years, have either died out, or have failed to produce vigorous and durable subjects; and I hesitate not to express as my belief, that those which have survived would, with the requisitions above named and care in transplanting, have attained double their present size and productiveness. Without a compliance with these principles, our advice would be not to plant, and thus save both time and money.

We can not refrain also from alluding to the great care which is requisite in the

removal of trees from the nursery. Of all careless things done in the way of cultivation, nothing is more to be censured than the barbarous manner with which trees are too frequently raised, or rather stripped out by main force without digging, thus destroying not only the small, tender roots, but splitting and mutilating the main ones. I rejoice in the belief that this practice is less common than formerly, and that it has in some of our best nurseries been reformed altogether.

Now it is principally on the young fibrous roots that newly transplanted trees must depend for receiving nourishment, and just in proportion as these have been destroyed will be the development of new wood, and the ratio of its growth; for every branch has its correlative in the root, and wherever a tree has been deprived of its roots, the branches must be reduced in proportion, or it will take a long time before equilibrium can be restored and vigorous and healthy action again resumed.

The same injurious consequences will result from crowding and doubling back the roots of a tree into a hole just large enough to contain them, or from deep planting; for roots, like human beings, delight in the healthful influence of light and air. Trees should therefore be planted shallow, and we have met with good success where they were planted nearly on the surface and soil brought to cover them. For newly transplanted trees, nothing is more beneficial than mulching the roots during the hot summer months. This may be done with coarse litter, refuse hay, or any substance which will shade the ground, and allow the rains to pass through. Under this treatment trees will thrive better, the size and beauty of the fruit is thereby much increased, and the roots encouraged to the surface, where they can assimilate the aliment which is indispensable to health and fruitfulness.

As to the *judicious selection of varieties*, I have to remark, that the only safe course is to choose such sorts, and *only such*, as by uniformity of character in various localities, particularly our own, have proved to be hardy, productive, and of good quality. Experience has shown that many kinds which have been highly lauded in the catalogues of the day, are not suited to our region, whatever may have been their ex-

cellence in other places. More than three-fourths of all the foreign varieties which have been introduced within the last thirty years, are unworthy of cultivation, or are not adapted to our location. Much disappointment has therefore been experienced from this source, as well as from selecting varieties which have no other excellence than a fanciful or crack-jaw name. To remedy this evil, and to diffuse correct information on this point, I have, in compliance with frequent solicitations, prepared a list of approved varieties in the various classes of fruits. In submitting this list, I have regarded the combined character of both the tree and the fruit; for instance, the health, vigor and fruitfulness of the one, and the flavor, size and beauty of the other. But I do not pretend that each of these varieties combines all these excellencies. Seldom is this true of any one sort; but I believe, from the experience of a long course of years, that the following classifications will be found well adapted to our locality.

## APPLES.

- For three sorts:*  
Large Early Bough,  
Gravenstien,  
Baldwin.
- For six sorts, add:*  
Red Astrachan,  
Porter,  
Rhode Island Greening.\*
- For twelve sorts, add:*  
Early Harvest,  
Williams,  
Minister,  
Fameuse,  
Hubbardston Nonsuch,
- Roxbury Russet.  
*For Winter Sweet Apples:*  
Seaver Sweet,  
Danvers Winter Sweet,  
Tolman's Sweet,  
Lyman's Sweet.
- For new sorts of high reputation, but not yet fully proved in this region:*  
Northern Spy,  
Ladies' Sweeting,  
Melon,  
Hawley,  
Wagener.

. Our country abounds in native varieties of apples, which are superior to most foreign sorts. Our list might be extended and perhaps hereafter improved.

## PEARS.

- For three varieties:*  
Bartlett,  
Vicar of Winkfield,  
Beurre d'Arenberg.
- For six varieties, add:*  
Bloodgood,  
Louis Bonne de Jersey,  
Golden Beurre of Bilboa.
- For twelve varieties, add:*  
Andrews,  
Belle Lucrative,  
Seckel,  
Flemish Beauty,  
Urbaniste,  
Glout Morceau.
- For twenty-four varieties, add:*  
Jargonelle,  
Dearborn's Seedling,  
Beurre d'Amalia,  
Tyson,  
Buffum,  
Dunmore,  
Long Green,  
Duchesse d'Angouleme,  
Beurre Diel,  
Fulton,  
Winter Nalis,  
Easter Beurre.

\* In this locality, southern Ohio, scarcely any of these apples can be very highly praised.—En.

## Varieties for Orchard Culture:

- Jargonelle,  
Bartlett,  
Golden Beurre of Bilboa,  
Vicar of Winkfield,  
Fulton,  
Buffum,  
Urbaniste,  
Beurre d'Arenberg.
- New varieties of Foreign origin, partially proved, and which promise well:*  
Doyenne Bossoch,  
Smith's Bordenave,  
Figue,  
Paradise d'Automne,  
Beurre d'Anjou,  
Nouveau Poiteau,
- Beurre Langlier,  
Van Assene,  
Soldat Labourer,  
Triomphe de Jodoigne,  
Duchesse d'Orleans,  
Jalousie de Fontenay,  
Doyenne gris d'hiver, new.  
*New American varieties of good promise:*  
Westcott,  
Pratt,  
Chancellor,  
Sheldon,  
Brandywine,  
Onondaga,  
Howell,  
Ott,  
Collins,  
Kingsessing.

## PEACHES.

- For three sorts:*  
Early York, (serrated fol.)  
Crawford's Early,  
Old Mixon Free.
- For six sorts, add:*  
Large Early York,  
George Fourth,  
Crawford's Late.
- For twelve sorts, add:*  
Grosse Mignonne,  
Bergen's Yellow,  
Druid Hill,  
Late Admirable,  
Yellow Rarripe,  
Heath Free Stone.

## PLUMS.

- For three sorts:*  
Green Gage,  
Jefferson,  
McLaughlin.
- For six sorts, add:*  
Rivers' Favorite,  
Lawrence's Gage,  
Purple Gage.
- For twelve sorts, add:*  
Reine Claude de Bayay,  
Bleeker's Gage,  
Imperial Gage,  
Smith's Orleans,  
St. Martin Quetsche,  
Yellow Gage.

## CHERRIES.

- For three sorts:*  
May Duke,  
Black Tartarian,  
Downer's Late.
- For six sorts, add:*  
Belle d'Orleans,  
Black Eagle,  
White Bigarreau.
- For twelve sorts, add:*  
Elton,  
Downton,  
Late Duke,  
Knight's Early Black,  
Sweet Montmorency,  
Sparhawk's Honey.

*Pears on the Quince Stock.*—Much attention has been given of late years to the cultivation of the pear on the quince stock, and in relation to which I have been requested to give the results of my experience. As a general rule, no tree will succeed for any great length of time where it is grafted on any other than its own species. There are, however, exceptions to this rule, and among them, some varieties of the pear, which grow vigorously, bear abundantly, and which seem to be even better adapted to the quince, than to their own root.

An impression has extensively prevailed unfavorable to the cultivation of the pear on the quince. This has arisen principally from an improper selection of kinds, or from injudicious cultivation. There are, however, three considerations which are absolutely necessary to success, viz., a deep, rich soil,

the planting of the quince stock entirely below the surface of the ground, and a systematic and scientific course of pruning, as the tree progresses in growth.

Objections to this species of cultivation have been made from the belief that the quince was a short-lived tree, and that the crop must necessarily be small from what are termed dwarf trees. Such, however, has not been my experience. On the contrary, I have pear-trees on the quince root which are twenty-five years old, and which produce annually a barrel or more of fruit each, and for aught that I can see, they are destined to survive as long as any that I possess on the pear root. These may, and probably have in some instances, thrown out roots from the pear stock, but whether this be so, or not, instances are not rare where such trees have attained in France the age or more than a hundred years, and we know of a quince tree in Massachusetts which is forty years old, and which has produced ten bushels of fruit in a season.

The pear, when grown on the quince, should always be trained in the pyramidal form. These may be planted much closer than when grown as standards. We have known them to succeed well where grown at the distance of six feet apart in the rows and twelve feet between the rows. In this way Mr. Rivers, the great English cultivator, planted 2,500 of the Louise Bonne de Jersey and 1,500 Glout Morceau for the London market. We consider twelve feet apart, each way, a liberal distance. This would give 302 trees to the acre, and we are clearly of the opinion, that soil and selection of varieties being right, no crop whatever would be more profitable. Such a plantation, with proper care, would yield, in the fifth year, from 75 to 100 bushels of fine fruit. As to profit, this will not appear as an exaggeration, when it is known that Glout Morceau pears, a variety which succeeds admirably on the quince, have sold during the winter readily at one to two dollars per dozen.

We name as varieties which succeed well on the quince the following, and to which might be added many more :

Louise Bonne de Jersey,  
Vicar of Winkfield,  
Duchess d'Angouleme,  
Glout Morceau,  
Passe Colmar,  
Urbaniste,

Belle et Bonne,  
Beurre d'Anjou,  
Beurre Diel,  
Easter Beurre,  
Beurre d'Amaulins.

There are many other topics which relate to the successful cultivation of fruits, on which I should be happy to address the meeting, did the time allotted to the chair, or my personal health or strength permit; such, for instance, as the appropriate manures, scientific pruning, diseases of trees, and the importance of raising new varieties from seed which shall be perfectly adapted to our region.

We must, however, confine our remarks to the other part of our subject,—

*The Preservation of Fruits.*—This is as important as any of the topics which have engaged our attention, for although the cultivator may be blessed with an abundant harvest, yet without a knowledge of the art of preserving his crop for future use, much of his labor would be unavailing. For the want of proper care in gathering and keeping our crops of fruit, it is estimated that one-third is annually lost, or materially injured in value.

Few persons are aware of the great care which is requisite in the *gathering of fruits*, and unless this part is well done, and done at the proper time, all future efforts for its preservation will be unsuccessful.

As a general rule, with regard to apples and pears, they should be gathered a few days before maturity. By this means, even summer varieties may be preserved for weeks, if stored in a properly constructed room. The flavor is also improved, and they may be kept for a much longer time than when left to ripen on the tree. They should never be permitted to remain after the tree commences to drop its foliage, because the flavor will be impaired after vegetation has ceased to perform its office.

Apples and pears should be picked by the hand, and in a clear, dry day; for whenever an injury takes place by bruising, although it be but an indentation by the thumb, there decay surely and soonest ensues.

So important is the process of gathering deemed by one of the largest exporters of apples to Europe, that he never allows a specimen to be packed which has an imperfection. Nor does the care cease here. The barrels are either carried on the shoulder, or on hand-barrows to the vessel, by which they are to be shipped. They consequently arrive in sound condition and command from six to nine dollars per barrel in Liverpool.

The necessity of this system has been fully tested by the fact, that apples which had been pressed by the thumb as an experiment, were found to be in a partial state of decay, and would bring only one-third, or half price, of sound ones.

For the long keeping of fruits, a properly constructed room is an indispensable condition. Some fruits, particularly winter apples, may be kept for months with ordinary care. This our farmers understand pretty well, by keeping them in cool, dry cellars; but the preservation of the more tender varieties, and especially the pear, is attended with greater difficulty.

The principal prerequisite is a room where perfect command may be had of the temperature. For this purpose it must be constructed so as to admit, or exclude, the external atmosphere, as circumstances shall require.—*New England Farmer*.

#### Reports from Virginia and South Carolina. To the American Pomological Society.

Of apples we are more and more confirmed, that for late keeping varieties we had better look to the South, than to get them from the North. Our summers here are longer than at the North, and fruit from there ripens here before the commencement of cold weather, consequently does not keep here well. We are endeavoring to obtain late keeping fruit from the South, and expect our delegate to present to the approaching Pomological Congress, some specimens as samples, which originated south of James' River, Virginia. Such samples can not be expected to exhibit their quality in their premature state, and I would suggest whether it would not be to the interest of the congress, to appoint a committee, to examine and report upon all fruit presented by members of the congress or others, at any season of the year. The comparative quality, and value of different varieties, as keeping fruits, can not be so well ascertained, by the congress, at any one time of the year, as if the different varieties were carefully examined as they become ripe. Should there be a committee appointed by the approaching congress, composed of the ablest pomologists of the neighborhood of Philadelphia, and they requested to examine and report upon all fruit

presented to them, and particularly state the quality, much might be done to establish the true character of new varieties.

It often happens that persons who have originated, or who wish to bring into notice, new varieties of fruit, praise it beyond its true merits. This may be attributed in part, at least, to ignorance of what in reality constitutes a good fruit. Many who are but partially acquainted with this subject, suppose, when they meet with something rather better than they have been used to, such must be truly excellent, when the mistake may originate in a want of knowledge of the qualities of other choice kinds.

Pears.—There has not been sufficient experience to speak with certainty, but from what we have seen we may confidently anticipate a rich reward for those who engage in their cultivation. We occasionally see the blight on trees here, but seldom to the extent that we hear of in some other places.

Some very aged and thrifty trees are met with, mostly seedlings, as but few trees were grafted here formerly.

Peaches.—We have great abundance in most seasons, as the trees have succeeded well—many of them thirty to forty years old.

The yellows has appeared in some places, and where no means are used to check its progress, it has entirely destroyed whole orchards; but where proper measures are resorted to, it has been checked altogether, and no doubt but that a simultaneous exertion on the part of all, would effectually remove the disease from amongst us. The past winter was one of unusual severity, the thermometer indicating from 10° to 14° below zero, and at least one-half of our peach buds were killed in the winter, and the crop was consequently light this season. Of apples we have a fair supply; cherries scarce this season, and of plums, the curculio uses up the larger portion.

From the interest that is beginning to be taken in the cultivation of fruit in Virginia, there is reason to believe that other portions of the state will be represented in the approaching congress, and that the time is not far distant when we may vie with our sister states in the quality, if not quantity, of summer fruits at least. In this we indulge in a spirit of emulation without envy, as it

is a subject in which all may feel interested and be benefited.

YARDLEY TAYLOR.

LOUDON COUNTY, Virginia.

Mr. ROBEY, of Fredericksburg, reported the following list of fruits:

No. 1. Carter Apple.—Long known in this country, and cultivated by almost every farmer. Bears enormous crops. August and September.

2. Summer Cheese.—September.

3. Roberson White.—September and October. Blooms very late.

4. Winter Cheese.—When grown, full medium size. December to February.

5. Gloucester White.—Two-thirds grown, nearly yellow at maturity. November to January. Rich aromatic.

6. Red Cathead.—Bears regular and heavy crops, fruit always perfect, fine for table and culinary. October to December.

7. Ladies' Favorite.—Bears large and regular crops, fruit always fair, keeps till January.

8. Limber Twig.—Dull red, keeps till May, regular bearer.

9. Abram.—Keeps till May, regular bearer.

10. Prior's Red.—Keeps till March.

11. Rawles' Jannet.—Keeps till March.

12. Garden Apple.—Bears young. October.

13. Hollady's Seedling.—Raised by John Hollady, of this county. Large fine yellow, with russet spots, very rich, highly perfumed, keeps till April, regular and good bearer.

14. Strawn's Seedling.—Rather large, flesh yellowish, rich, crisp and juicy, bears large and regular crops, fruit always perfect, keeps till April.

15. Leather Coat.—Winter.

16. Bowling's Sweet.—When ripe, very rich. October to December. Bears large crops, fruit always fair.

17. Milam.—Dark red when ripe, keeps till March, fruit always fair.

18. Spice Apple.—Not half their usual size, owing to the tree being overloaded.

19. Ogleby.—Raised, by an old colored man, from seed of a red fall apple. The original tree has borne this the third year. When ripe, fine yellow, very rich, a little spicy. Specimens have been kept till Feb-

ruary, and I suppose they would keep longer.

20. Summer Golden Pippin.—The specimens are not so large as they usually grow, fruit always fair, bears well.

21. Green Newtown Pippin.

22. Waugh's Crab.—The specimens are not half the size of this apple when grown, bears very heavy crops, have been left on the trees until Christmas, to freeze and thaw, without much injury; if crushed in January it makes the finest white cider, fully equal to Hewes' Crab, from March to June it is a fine rich table apple, nearly sweet.

23. Wine Sap.—Bears regular and fine crops, and keeps well till March.

24. Baltimore Pippin.—Bears well, and the fruit good. September and October.

25. Vandervere.—Juicy and good, bears well, keeps till March.

26. Russet.—Variety not known, a good winter fruit.

27. Brooke's Pippin.—The tree from which this apple was taken, was found upon the farm when Mr. B. purchased it, about forty years ago; it was then about the size of a coach whip. He thinks it is a seedling. The tree is now very large, bears regular and large crops of fruit, always fair, of the largest size; keeps well till May; fine, yellow flesh, juicy and rich, and of the finest flavor; the tree grows in a warm, sandy soil. Mr. B. has nearly all the known varieties of the Pippin, which very rarely come to perfection; young trees in the nursery grow very thrifty. I regret that specimens of this apple, from Mr. B., did not reach me before I left home.

28. Winter Queen.—Bears large and regular crops, keeps till February, fruit always fair.

29. This is a pear that I present for a name; it is a grafted fruit, grown extensively in the lower counties; said to have been imported from France about seventy years ago. No doubt it will be readily recognized by the committee in this state. It bears regular and very large crops, and very rarely an imperfect fruit is seen on the tree; it is sometimes in eating 1st November, will keep with very little care until February, and specimens have been kept until April. It is known here as the Taylor Pear.

I have put in three kinds of seedlings,



Nos. 1, 3, and 4, and one marked Robey's Seedling; the latter promises to be a fine winter apple.

I would here state that the specimens of fruit are not near their usual size at this season of the year, owing to the very dry summer; until recently we have had very little rain, and a good many kinds are from trees growing in old fields, very poor, and not cultivated for many years.

H. R. ROBEY.

HOPEWELL NURSERIES, Fredericksburg, Va.

Mr. WILLIAM SUMMER writes to the late President, from Pomaria, South Carolina, September 6th, 1852:—

The fruit season has been a fine one; we were favored with a great abundance of all kinds. The cherries bore very heavy crops, the fruit large and fine. The mature apricot-trees bore immense crops. The plums, too, were fine on heavy clay soils. I have never had any difficulty in growing good crops with a little attention to guard against the ravages of the curculio, and for this purpose I mainly depend upon the pigs picking up the waste fruit. The new Seedling Plum maintains its character, and I think is worthy of general cultivation.

Pears.—The trees of the Petit Muscat were loaded until the limbs bent down like an umbrella. The Julienne and Seckel were of fine size, and the flavor very superior, while the Bartlett, Doyenne Blanc, Duchesse d'Angouleme were of larger size than usual. The Beurre Capiaumont bore very heavy crops. The Fulton is with us one of the finest pears; and the Croft Castle eaten today, proves to be a pear worthy of cultivation in our soil and climate. I think in our warm, deep soils that many varieties of the pear are improved in flavor.

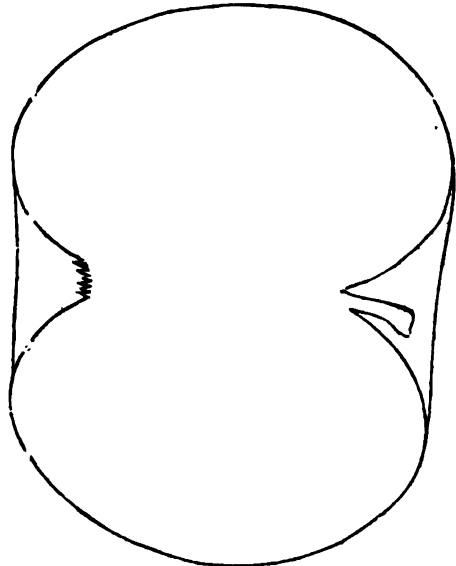
We have had a bountiful supply of apples and peaches. They were everything that could be desired; but as I have not time to particularize, I must bring this hasty note to a close.

WILLIAM SUMMER.

#### Jeffers Apple.

As fruit culture is attracting the attention of farmers and others, I hope your correspondents will from time to time, as in their power, give information of such seedling

fruits as are deemed worthy of cultivation. It is believed this and the neighboring counties do furnish native fruits of as much excellency as any portion of our country, many of which are scarcely known beyond the neighborhood of their origin. This is to be regretted, particularly as the soil and climate where they originate and have proved their good qualities, are sure guaranties that in this region at least, they may be cultivated with success; and it may also be presumed that what suits this climate will succeed well in a large portion of the Union. As you have shown a liberal spirit in giving accounts and representations of animals, implements, etc., interesting to farmers, it is hoped you will encourage the diffusion of the knowledge, history, properties, and description of new fruits, particularly of our native seedlings of worth. Some of your subscribers believe you would render good service to the community by calling more particular attention to an excellent apple that is known to perhaps but few, although it has been exhibited at some of the horticultural exhibitions in the eastern part of the state for several years. I mean the



JEFFERIS APPLE.

"*Jeffers apple*." It originated on the farm of Isaac Jeffers, in Newlin township, Chester county, Penn., and was by him exhibited

to the Chester County Horticultural Society, at their annual exhibition, in 1848, and, by the committee on Seedling Fruits, named "Jefferis," by which name it has since been known. At the late meeting of the American Pomological Society, the committee on Native Fruits pronounced it "best," which, in pomological language, means "first-rate." The following is a description of the fruit:

Shape oblate spheroidal. Skin, in its ground color, lemon yellow, streaked and stained with red, but on the side next to the sun, deepening into rich red, dotted with white spots, and a little russety round the stalk or stem. Stalk about half an inch long, slender, inserted in a narrow, deep cavity. Calyx woolly, nearly closed, set in a regular, well formed, deep basin. Flesh white, crisp, tender, melting, juicy and of exceedingly pleasant flavor. In use from the middle of August until late in October, and is an excellent fruit both for cooking and the dessert. Its superior, for the season, I have not met with. Tree a rather moderate grower, with upright habit, and said to be a constant and abundant bearer. It can be had at some of the Chester county nurseries.

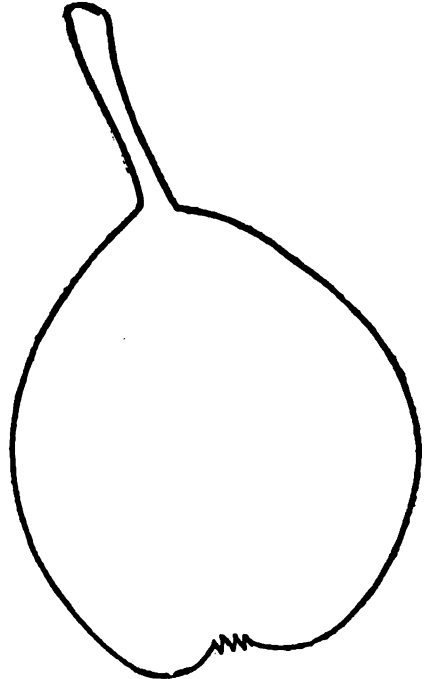
DAVID TOWNSEND.

WEST CHESTER, PENN.

—*Farm Journal*.

#### The Diller Pear.

"DILLER" is among the very best August pears, and deserves a place in every collection in this state. It is named after the person on whose property it grew and by whom it was most probably raised from seed, one hundred years since. Tradition says he brought the tree or cions from Germany; but this is extremely doubtful, because of long voyages and want of horticultural knowledge. It is more probable he brought seed of some favorite pear, planted it, and raised this tree. Its growth much resembles the Bloodgood, short jointed, wood reddish brown, not a rapid grower, but bears regularly and abundantly. Fruit of medium size, obovate irregular or one-sided, thickening abruptly into the stalk, which is an inch long and obliquely inserted. Skin, at maturity, golden yellow, sprinkled, and one side mostly covered, with light cinnamon russet. Calyx mostly open, set in a slight, smooth depression. Flesh yellowish white, buttery, with rich sugary luscious



DILLER PEAR.

flavor; a little gritty at the core, which is small. Seeds long, black and pointed.

J. K. ESHLEMAN.

#### Culture of Fruit at the South.

The following remarks are worthy of note to Southern readers, and contain elements of truth worthy of consideration in the North also. Let us rejoice at the reception of useful hints, even when accompanied by a reflection against our nurserymen. Would that the Southern States were well supplied with sensible nurserymen, who would observe the peculiarities of situation, soil and climate, and advise their purchasers accordingly.

It is believed that our Southern friends will contribute a quota to the next meeting of the American Pomological Society, at Boston, October, 1854. By them we hope to be introduced to many new varieties of fruits, and to be informed of many interest-

ing facts in pomology. It is sincerely hoped that the suggestion of Mr. Peabody, in the *Soil of the South*, from which this article is taken, will be acted on, as the committee appointed to examine the fruits of the state, would collect much valuable information.

MR. EDITOR:—One of the most fatal mistakes committed by those who have engaged in the cultivation of fruits at the South, has been the adoption of the methods prescribed by Northern nurserymen. After many years of disappointment in following the directions of English gardeners and nurserymen, they had to abandon them, and strike out a system of their own, better suited to their climate and soil, before much progress was made in this department of horticulture. We at the South in like manner have been led without reflection into the same error, for there is not a greater difference between the climate and soil of the Northern States and England or Belgium, than there is between the Northern and Southern States; and it is not reasonable that the same *modus operandi* would answer well for the cultivation of plants and trees of both sections of country.

What is yet more strange is, that whenever any of the Southern nurserymen we have, have written or given directions to those who have purchased from them, it has been but a reiteration of rules laid down at the North, so far as I have seen, until there is, from the frequent failure of many who have attempted raising some kinds of fruit, an opinion prevalent that they can not be grown here successfully. My object in writing this short article is to endeavor to disabuse this opinion, by prescribing such plans and processes as experience has taught me to be better adapted to the region of Georgia, and which I hope and believe will prove satisfactory to all who may try it.

I shall begin with a few simple rules for the cultivation of the apple, and at another time, if this meets with a favorable reception, take up other varieties of fruit by turns. In the selection of a site for an orchard, take one that inclines to the north or north-west. Plow and subsoil it well, and stake off for your trees, twenty-five feet each way; dig the holes from one foot to

eighteen inches deep, and three feet in diameter; select trees one to two years old, from a good Southern nursery, and plant them in these holes, filling them up with a soil taken from some swamp or low ground, if convenient—if not, get that composed of decayed leaves, or other vegetable substances, to which should be added a shovelful of ashes or lime.

The after culture of the ground is of more consequence to success than the mere planting of the trees. This should be done by always keeping it occupied with a green covering of some kind. I prefer and use clover; in sections of country where this does not grow well, I would choose peas. The advice of Northern nurserymen to keep the ground clean, or in a hoed crop, will not answer here, as it becomes so heated by our vertical sun as to injure the roots of the trees, and either kill or render them worthless. Mulching has been advised. I say the best mulch is a green crop; nothing else is as good a radiator of heat as this. Keep the ground clean for a few inches about the trunks of the trees, so as to prevent insects from harboring there. Manure and plow the ground once in every three or four years, and I will not hesitate in saying that the choicest apples may be raised from the sea-board to the mountains in Georgia.

By the way, I should have mentioned that the trees should be trained with low heads; the limbs should not be suffered to put out about four feet from the ground, and should the tree be of upright or tall habit, cut off those branches that shoot up, and compel a lateral growth, as a tree with a low spreading head always bears best, and at the same time shades and protects the trunks and roots from the heat of the sun. It is a good plan to tie a common clapboard against the south-west side of the trunks, for two or three years, or until the top has made growth sufficient to shade them. Where this is neglected, I have known the trunks to become blistered, and the death of the tree be the consequence of the neglect. In conclusion I will reiterate, keep a growing crop on the ground, that will cover it well, and there is but little doubt that you will succeed, anywhere, in raising this delicious fruit.

J. VAN BUREN.

GLOAMING COTTAGE, near Clarksville, Ga.

**The Troubles of a Country Nurseryman.****CUTTING GRAFTS IN THE AUTUMN.**

MR. EDITOR :—Some months ago, you requested me to write my views and observations on the proper time for making cuttings for grafting, etc. I think it not impossible for a novice like myself sometimes to discover a great error in what may be the universal practice of experienced nurserymen, and I am inclined to think from my own observations in the limited experience I have had in the nursery business, that there is yet room for improvement.

As to the time for making cuttings, I can say that I have had absolute proof that the fall is the best time for cutting pear, plum, cherry, and grape; nor would I except the apple. And for this simple reason: when they remain on the trees until February or March, as is the common practice, many of them become either winter killed, or are so much weakened as not to have vigor or force in them to form a union with the stock; whereas if the cuttings are made in the fall and buried in the earth, they come out in the spring with all the freshness they ever possessed, and when grafted will grow with absolute certainty, if the operation is properly performed upon a healthy stock. According to my experience, grape cuttings are almost worthless, if not taken in the fall and kept in the earth until the time of planting.

Perhaps it may be of more service to many, both sellers and buyers, for me to give a little history of the losses, disappointments and impositions to which I have been subjected in my dealings with nurserymen and those connected with the business. In 1847, I sent an order to Louisville for a lot of apple grafts, and had to pay a double price simply because the seedsman to whom I sent the order, sent me, through

mistake, another package put up for a different person, and which I returned; but, by a peculiar circumstance in the case, I had both packages to pay for, or involve a friend in a difficulty. Again, in 1848, I purchased a lot of grape cuttings and apple seed; not one in a hundred of the cuttings grew, and not one in a thousand of the seed germinated. Again, in 1849, I purchased a small lot of Osage Orange seed, which were planted with the utmost care in the best soil, and but one solitary seed vegetated. And again, in 1850, I bought of the same seedsman a lot of Osage Orange seed, also pear, plum and apple grafts; the seed proved again to be worthless, about two-thirds of the pear and plum grafts were winter killed—they were dead and black, and the nurseryman who furnished them could not have been ignorant of the fact, or if he were, he trusted to a hireling, which no honest nurseryman should ever do.

I now come to speak of some catch-penny impostors, hailing from the state of Ohio, to let you know what kind of representatives the Ohio nurserymen have had among us, on this side of the river. A few years ago, I think in 1844, a company of grafters passed through a portion of this county, (Shelby,) and some of those adjoining; and to show you how they imposed upon every one who employed them, I will give you one instance. Dr. Clayton, of Christiansburg, employed them to graft a tree in his door-yard, the fruit of which was excessively acid. A neighbor, Mr. Flood, came while they were performing the work, and inquired of the grafters if they had any sweetening grafts? They replied in the affirmative; a bargain was made, and they went over to Flood's and grafted his trees. In due time the grafters came along and collected their money. About the third year the grafts produced fruit, and behold,

it was Dr. Clayton's *sour* apple, that neither man nor beast could eat.

In 1849, a man by the name of McCaffry, from Dayton, sold a great number of fruit trees through this and some other counties. If he ever comes back, he may consider himself fortunate if he escapes a coat of tar and feathers; for about half of the trees are dead, and I doubt whether the other half will prove to be of much value. I bought a few trees in order to obtain some additional varieties, but I now have no confidence in them whatever. He sold me the common black sort for the large red grape currant. Of two apple-trees, labeled Tulpehocken, one is of robust and rapid growth, with a black glossy bark; the other of slender growth, a yellow bark, inclining to red. Of two pear-trees, labeled Seckel, one has bright yellow shoots, the other dark red.—One of the apple-trees I believe to be the Fall or Golden Pippin, the other very much resembles the Prince's Harvest or the French Reinette. The pear-trees, beyond doubt, are of different varieties, but neither of them corresponds in appearance with the Seckel. McCaffry showed the catalogue of Hickes & Co., Dayton, Ohio. And now, Mr. Editor, if we the people of Negrodom lose confidence in the honesty of the people of Yankeedom, who is to blame?

I should have said in another place, the present winter so far has proved an exception to what I have said about making cuttings in the fall; but the fatal effects of last winter prove most clearly that in all cases it is the safest to cut in the autumn.

Is the mode of training the grape-vine, as practiced about Cincinnati, the very best that can be adopted? It may be the most simple and convenient; but some facts that have come under my own observation, have almost brought me to the conclusion that the vines are too much crowded and kept

too low. I have a small vineyard that produced some fruit last year. Nearly all the bunches near the ground were destroyed by the rot or mildew. Those that grew four or six feet from the ground were less affected with the disease. A German near Evansville, observing the same fact, trained some of his vines twelve or fifteen feet high, and they produced fruit of the best quality and entirely free from disease, while that on stakes of the ordinary height was much inferior in quantity and quality. A friend of mine had some vines in his garden trained upon a trellis about eight feet high; the fruit varied in quality from the bottom to the top—that at the top being the best. A vine trained on the walls of the house to the height of sixteen or eighteen feet, bore fruit in great abundance and without a blemish.

I notice in your December Number, an article about stocks. The writer says—"The peach has been fairly tried as a stock for the plum, and found wanting." He admits there were some "instances of success;" but says, "they were the exception, and not the rule." Again he says—"What peculiar influences may have been in operation in the exceptional cases, it may be difficult to determine; but unaccountable things do sometimes occur." I readily admit that the peach has been found wanting as a stock for the plum in one method of grafting or budding; but that it is found wanting under all circumstances I can not admit; but on the other hand I feel free to assert, that under certain treatment, the instances of failure would be as rare as his instances of success; and if he had examined carefully those instances of success, he would have discovered the influence that operated in the exceptional cases, and it would not have been, even in his mind, unaccountable. To my mind it is strange, that the solution of this difficulty could have

been overlooked by the most superficial observer among those familiar with fruit culture. It is simply this: if the plum be grafted in the peach stock, and planted sufficiently deep, the plum will readily and quickly form a root of its own. And in removing from the nursery, if you object to the peach root, it may be entirely cut away, and then you have a plum-tree emphatically upon its own root, from which you may propagate the same fruit *ad infinitum* by suckers, without the labor of grafting or budding, or without stocks of either peach or plum. The same is true of the pear grafted upon the apple, quince, or common hawthorn; indeed, I greatly prefer these stocks to the pear. I have a number of trees on these stocks, and some on the pear. Those on the pear become mildewed about the middle of summer, the leaves turn black and fall, and the trees cease to grow; while those on the other stocks are entirely exempt from the malady, and continue growing to the end of the season. I see no difference in these respects between the different varieties; all are alike healthy and vigorous in one case, and alike diseased in the other.

I have noticed much discussion on the killing of fruit and other trees by the cold; much difference of opinion has been expressed as to the time the injury was inflicted, and the agencies effecting it, and none have yet arrived at any very satisfactory conclusion on the subject. The discussion, in my view, is mostly speculative and conjectural; while the real facts in the case have not been observed. My own observation leads me to differ in some respects with all who have attempted to solve the mystery. In the spring of 1846, many peach-trees were found to be dead, and the general supposition was, that the cold of winter had destroyed them; whereas the injury was inflicted by the first severe frost in the

fall, which occurred about the last of October. The weather previously had been warm; the trees were in a growing state; a cold blast suddenly came on at night, the ground froze considerably, in the morning the sun shone quite warm, and in walking through my nursery about ten o'clock, I found the bark of a number of my young apple-trees bursted near the ground, from three to six inches in length, in some cases half way, and others entirely around the trees. The bursting or cracking of the bark, in this case, was produced by the heat of the sun acting upon that portion of bark which had been loosened by the frozen sap. In the following spring, I found some of my bearing peach-trees were killed—some in part, and others entirely. On examination, I found the bark separated from the wood, and from the appearance it was evidently the effects of the freeze in the fall. Again; last spring a great many peach-trees were found to be dead, (only in low situations in this region.) The question arises, what agencies produced this effect? Nearly all who have attempted to account for it contend that it was the heat of the sun falling upon the trees while in a frozen state. With this opinion I do not fully agree—first, because the very same thing happens repeatedly every winter; and secondly, because my trees were but partially injured, and that on the north or north-west side of the tree, where I found the bark loose in spots from three to twelve inches in length, and two to three in width. I account for the injury in this way: the peach-tree continues its growth until late in the fall; a cold blast sometimes suddenly comes on before the flow of sap has been fully suspended, the sap freezes, and by its expansion separates the bark from the wood, and if this separation encircle the tree, it will die, though the sun should not shine on it for a month.

It is the freezing, and not the thawing, that causes the injury. Fill a bottle with water, leave it exposed to the cold ; some weeks or months afterward you find it broken ; would you start the question whether it was the effect of thawing or freezing ? By no means ; the cause of the effect in this case is so palpable, we have no difficulty in coming to a direct conclusion. Neither do I think we need, in case of the tree, to search into the mysteries of physiology or chemistry to find the cause or determine the time when the injury was inflicted. The difficulty is mainly to be attributed to the simple fact, that the sap of the peach-tree continues to flow until a late period in the fall, and thus endangers the life of the tree in case of a sudden freeze ; and perhaps the best remedy may be found in allowing vegetation of some kind to grow around the tree early in the fall, so as to exclude the sun from the soil, and thus check the flow of sap. Respectfully, yours,

SAMUEL VENABLE.

SHELBY COUNTY, KY., January 26.

#### Choice Peaches for the South.

WE have three peaches, of pretty good quality, without names, two of which were received from Mr. Prince, by Mr. Camak, with the statement that they were too late to be valuable in that climate, and the other obtained by Mr. Camak from an old field in this state ; all of which are really valuable, as they ripen between the 15th of September and the 15th of October. We have also a Cling of very good quality in warm seasons, that ripens the 1st of November ; making it possible to extend our peach season from the 20th of June till about the middle of November, in favorable years.

The best peaches for a succession, in this climate, are Columbus June, Walter's Early, Grosse Mignonne, Crawford's Early, Belle de Boucaire, Crawford's Late, Newington Cling, Yellow Blanton Cling, White English and Bough. Add to these Early York, Early Admirable, George IV., Bellegarde,

Late Admirable, Late Red Rareriipe, President, Lefmon Cling, Tippecanoe, November Cling, and the unnamed varieties above for October, and the collection is quite as large as desirable.

W. N. WAITE.

ATHENS, Ga.

—*Horticulturist.*

#### Peach-Tree Borers.

SOME recommend careful examination about the roots, and clearing away all gum, grubs and dead bark with a sharp knife, cutting along the track till the enemy be discovered. Others advise thrusting a wire along his track ; then wash with soap and soot, and return the earth in a little hillock about the tree. The Massachusetts Plowman advises prevention, as follows :

We object to using a sharp knife about the roots of the peach-tree. Knives do more hurt than good. Place something around the tree to exclude the borer and you save it, but cutting and hacking the bark of the tree to find the borer is worse than scratching after a flea bite.

Peach-trees will not bear wounds on the limbs. Small twigs may be cut, such as will heal in one summer, but larger wounds should never be made.

Wood ashes placed around the trunk in May, annually, will keep the borers away. It is said that herbs of various kinds offensive to the fly that deposits the borer, will answer the same purpose. Tansy is said to be effectual when placed about the trunks.

We recommend preventives in preference to cures.

#### Advice to New Planters.

THE attention of those readers who are about to plant orchards, is especially directed to the following excellent advice, found in the *Prairie Farmer*, emanating from one who has sold and planted many of the orchards in the North-west :

When you send an order to a nurseryman for trees, and especially if you intend only "large trees," always give him some lee-way, or liberty of substitution. According to our experience and observation, not one nurseryman in fifty can at all times fill

every order exactly as sent to him. We all work most of the sorts most in demand, or which we deem best suited to the trade, or to our soil and climate, etc. But often there will be a run on some varieties, of which the nurseryman had not worked largely; or even a large stock of one or more varieties, may be exhausted entirely. Therefore, always send orders early, and if you are not positively determined to have the exact sorts, and the precise number of each, give the nurseryman the privilege of adding to the numbers of some, and diminishing others, or substitute equally good varieties, which you may not have named.

J. A. K.

#### More about Stocks.

I FIND in the agricultural department of a late number of your Journal, under the head of something about Stocks," an interesting article upon "The mutual relations and influences of the cion and stock."

In this article, many facts are collated which are replete with interest and instruction to the pomologist, and the *rationale* for many practical operations is so clearly pointed out that the most inexperienced cultivator can scarcely err.

I am constrained, however, to believe that this same article contains a few things stated as facts, and a few inferences drawn therefrom, which are not reconcilable with the present state of the science of vegetable physiology; and, under cover of your invitation, as also in virtue of my right as one of the disciples of Pomona to scrutinize any new tenets offered for adoption in her schools, I propose in a few words to state my grounds of dissent.

In the first place, it is a maxim in philosophy that "we are not warranted in assigning more causes than are sufficient for the explanation of any given phenomenon." If, therefore, as I think is true, it is because the dwarf is at bottom and the tree of larger proportions at top, in case the pear be grafted on the quince, that the growth of the pear top is moderate and early fruitfulness a consequence; and if, as I think is also true, a reversal of this order of position in the cion and stock, whereby the dwarf or quince species is inserted upon the larger growing stock of the pear, would

stimulate the quince top to an over luxuriant wood growth with less of fruit. If, again, which is very possible, the dwarf Siberian Crab, when inserted upon a larger growing seedling apple stock, would produce a greater volume of roots than the larger growing Baldwin upon one of the same seedling stocks, instead of relying for a solution upon the mysterious influence of the stock upon the cion or cion upon the stock (a cause seeming to lead to contradictory results, since, while the narrow vessels of the dwarf were at bottom, they could not transmit sap enough to make wood, but on being seated at top transmit it in quantities to produce wood in excess,) why not have recourse to the better established doctrine of high and low feeding?

Newton, at the time of his death, had not more believers in the existence of a projectile force and a force of gravitation in the solar system than there are of those who, at this day, think that wood growth is stimulated by high feeding, and fruitfulness by an opposite course of treatment; or, in other words, that whenever the amount of food thrown into circulation is fully equal to the digestive powers of a system of vigorous leaves and buds, free wood growth is the consequence, and when from any cause, the supply of sap is short, a tendency to fruitfulness follows. But maiming the roots by pruning and using plants with dwarf systems of roots are among the recognized expedients of starving plants into fruitfulness. If, therefore, the placing of a dwarf system of roots in the position of caterers for the wants of a large plant should starve the plant so fed, it follows as a consequence, and not as a mystery, that changing the order of insertion, the larger system of roots would furnish more than a fair supply of sap for the dwarf, and would thus stimulate excess in wood growth precisely as is done by too free use of manure; and as is rightly said by the author of the article alluded to, such tendency to wood growth may be so great as to destroy fruitfulness, as in the case of many plums upon the peach stock. It is no disproof of this doctrine that a few solitary trees or a few varieties of the plum succeed upon the peach—some peaches are smaller and some varieties of the plum (such as Prince's Gage) are large; and again, notwithstanding this tea-



dency to wood growth, accidental circumstances or peculiar treatment may, in solitary cases, have overcome this tendency.

Before closing this article I may remark, however, that the powers ascribed to mysterious influences in this well written article are tame in comparison to those set up by many other modern writers; and I am tempted, in consequence of their extravagance, to advert to some remarks contained in that very respectable periodical, the *New England Farmer*, for December last. One gentleman asserts that if a cion from a sweet apple be inserted upon a stock of an acid variety, the fruit will be a compound between the two. Another alleges that the Red Russet, a celebrated red Eastern apple, was obtained by grafting the Baldwin upon branches of a seedling in close proximity to the Roxbury Russet—the result, as he believes, of cross-impregnation between the Baldwin and Roxbury Russet; and what seems most strange in this case is, that this new character, which he supposes imparted to the cross-impregnated fruits, extends even to the branches on which they grow, so that cuttings therefrom produce the compound fruit.

Now the great diversity of form sometimes witnessed in the individual specimens of fruit upon an apple-tree might justify a belief that the amount of pollen, or pollen from a different variety, affected somewhat the form of fruits and afforded evidence that the seedlings of such specimens would vary; but a doctrine of influences, broader than this, overtakes credulity. It would lead to a greater confusion of colors and qualities in fruits than ever was witnessed among flocks or herds in the pastoral days of Jacob. It is a doctrine against analogy, and I think at war with the conviction of the best observers.

The true doctrine on this subject, in my opinion, is that which considers the vessels of the stock mere channels of communication for conveying food to the cion, and that the powers of assimilation are local. I can not well conceive how quince atoms in the quince roots would rise through pear branches to be aerated by pear leaves and again descend by the bark of the pear and form quince wood upon the stock and roots, without comminglement. Yet it is well known that every particle of wood and bark

and every water-sprout above the line of union is identical in its nature with the cion, while below each one corresponds with the nature of the stock.—*Louisville Journal*.

REMARKS.—These philosophical observations of Mr. Young, the well known and able correspondent of the *Louisville Journal*, whence extracts from his writings have already been taken, are now gladly presented to the reader, as they are sentiments of a sound mind deduced from the practical study of nature.

The origin of the Red Russet referred to by Mr. Y., and about which so much has been said in the Eastern States, is indeed a mystery which, in the present state of our knowledge, I shall not attempt to explain. The authenticity of the record, supported as it is by high editorial authority, can not be called in question; besides, we have corresponding evidence of a somewhat similar character among some of our common fruits. Thus with the Milam red apple, which has been grown for half a century in this neighborhood, and of which thousands have been propagated from root suckers and grafts, we find striped fruits. In the same old orchards there is formed another apple in nearly equal numbers; it is a small Russet, sometimes having a blushed cheek, rich and juicy. This fruit has not been identified with any other known variety, and is called by our Horticultural Society the Neat Russet.

Growing promiscuously and closely planted, these apples offer a fine opportunity for cross-impregnation. Of this, however, no results have been brought before the public, although we might reasonably expect a product excelling both the parents, and presenting even some of the exterior characters of each. Such a seedling may yet be in store for us. This, however, we do know, that fruits of the Milam trees often

present a surface partially or entirely covered with russet, without a correspondent difference of taste; however, they are essentially Milams, with a russet, instead of a bright, smooth, shining, red skin. This result has been hastily attributed to the influence of the pollen of the Russet trees; hastily I say, for as like causes produce like effects, we should constantly find similar results in our mixed orchards, which is not the case. I should rather attribute the circumstance to the supposition, that the two apples originated in the same parcel of seedlings, and partook of the same consanguinity.

I am not aware of any experiments having been made to perpetuate the variety here noted, by grafting or otherwise, as has been done with the Red Russet in New England. But, if such experiments were followed by a similar result—the establishment of a permanent variety, I should not attribute it to the influence of pollen from another tree, having produced an effect upon the fruit and *stem*, in addition to its legitimate one upon the seed; I should rather refer the phenomenon to a curious freak of nature, such as is often observed among greenhouse and garden plants, where we see what are called “sports,” equally remarkable in the decided changes of color and markings, in the leaves and petals of geraniums, encnymphus, buxers, vinca, and many others, which occurring originally as *sports*, are continued permanently in the cuttings and offsets.

With regard to the growth of plums upon peach stocks, the result of considerable observation has proved to me, that while some varieties take much more readily than others upon the peach, and grow with corresponding vigor for the first year or two, few ever make large and permanent trees, unless they have been so situated in the

ground as to have been able to form a system of roots of their own. The same observation has been made upon the growth of pears that had been grafted upon apples or thorns; fine shoots were thrown up the first year, but the union was not perfect, and the descending sap, aerated and prepared by the leaves of the pear, appeared unsuited to the sustenance and growth of the original stock and roots below. Therefore those who graft pears into apples or thorns, should always preserve one or more limbs of the original stock to retain its vitality and health. Further, those who wish to experiment in the nursery by using dissimilar or uncongenial stocks, such as wild plums or peaches for plum grafts, or apple and thorn for pears, are urged to set them deeply in the ground, and earth up decidedly for two seasons, so as to enable the cions to establish their own roots.

The quince for pears, the Mahaleb for cherries, and perhaps some other stocks for certain varieties, appear to be sufficiently cognate to produce good results; but even here we need the combined results of many observations, before we can safely determine which varieties may be safely recommended for this mode of treatment. The attention of pomologists is requested to this topic, and their opinions are solicited.

*Messrs Editors*:—I send you today, some fruit from the old Endicott pear-tree, which I received from C. M. Endicott, Esquire, of Salem, one of the descendants of Governor Endicott, and the author of a very interesting memoir of his worthy ancestor. In regard to the origin of this ancient tree, he told me that “the trees which composed his first orchard, of which this venerable patriarch is the only survivor, were imported, [in 1628,] and not raised from the seed, as I had supposed, but they were packed in boxes, containing earth, and that this was a common way of importing fruit trees, at that period.

S. P. FOWLER.

DANVER, Sept. 18, 1852.

—N. E. Farmer.



## The Garden.

### "MY GARDEN GATE"

Stand back, bewildering politics,  
I've placed my fences round ;  
Pass on, with all your party tricks,  
Nor tread my holy ground.  
Stand back—I'm weary of your talk,  
Your squabbles and your prate :  
You can not enter in this walk—  
I've closed my garden gate.

Stand back, ye thoughts of trade and pelf,  
I have a refuge here ;  
I wish to commune with myself ;  
My mind is out of gear.  
These bowers are sacred to the page  
Of philosophic lore ;  
Within these bounds no envies rage—  
I've shut my garden door.

Stand back, Frivolity and show ;  
It is a day of Spring ;  
I want to see my roses blow,  
And hear the blackbird sing ;  
I wish to prune my apple-trees,  
And make my peaches straight ;  
Keep to the causeway, if you please—  
I've shut my garden gate.

I have no room for such as you,  
My house is somewhat small ;  
Let love come here, and friendship true,  
I'll give them welcome all ;  
They will not scorn my household stuff,  
Or criticise my store.  
Pass on—the world is wide enough—  
I've shut my garden door.

Stand back, ye pomps, and let me wear  
The liberty I feel ;  
I have a coat at elbows bare,  
I love its dishabille.  
Within these precincts let me rove,  
With nature free from state ;  
There is no tinsel in the grove—  
I've shut my garden gate.

What boot continual glare and strife ?  
I can not always climb ;  
I would not struggle all my life ;  
I need a breathing time.  
Pass on ; I've sanctified these grounds  
To friendship, love, and lore ;  
You can not come within these bounds  
I've shut my garden door.

### LAUREL AND AZALEA SOILS.

DR. WARDER :—I was gratified to learn from the last number of the Review, that R. B. N. had succeeded in finding *Laurel earth* ; and that her *Kalmia latifolia* had revived. By way of encouragement to her and others interested in such culture, I would state that my *Rhododendron maximum*, which I carried, not two years ago, on a small hand-spade, and set in a bed of this earth, is now decorated with twenty-one flower buds as large as plums ; and if no accident happens

in the coming season, the display will be finer than anything of the kind that was ever seen in this quarter.

It is sad to think how many fine plants of the *Heath* tribe,\* have perished in our ungenial soils before I made this discovery.

\* This natural order includes many genera, among which are *Kalmia*, *Azalea*, *Rhodora*, *Rhododendron*, *Epigæa*, *Andromeda*, *Gaultheria*, *Arbutus*, *Pyrola* ; but there are many other plants not belonging to this order, that require a similar soil, such as *Helonias discolor*, *Frillium pictum*, *Euchroma coccinea*, and many others.

Many years ago, Robert Carr, of the Bartram Botanic Garden, near Philadelphia, sent me a large *Azalea calendulacea*—called by Pursh “the handsomest shrub in North America;” but it imbibed the *poison*, and died in the second year after its removal. I have now one of the same kind, which has stood in a border of selected earth four years; and its growth in the last season was the most vigorous of all, being more than eleven feet, if we count the length of all the shoots. Another species of this genus, (*A. pontica*), with yellow flowers, has become a robust shrub, and to all appearance *quite at home*. The *Kalmias* also hold their own, after a trial of eight years. The Purple *Magnolia*, (*M. obovata*), which in our common soil was sickly, with *white* leaves and some dying branches, began to revive soon after it was set in *laurel earth*; and acquired as *green* a leaf as perhaps it ever wore in China.

D. T.

GREATFIELD, 1st Month 24.

#### Leaves for Potatoes.

Will you allow a plain practical man to occupy a few lines in the agricultural department of your excellent paper, on a subject not often alluded to in our agricultural journals?

I will not at present stop to unfold the character and use of leaves in the economy of vegetation; nor will I attempt to analyze their component parts, and show their immense value as enrichers of the soil. At some future time I may undertake this task.

My present purpose is to call the attention of farmers to the use of leaves in the culture of potatoes. The largest crops and the best potatoes I ever saw grown, were produced by the aid of leaves. My plan is this:

I have my ground spaded up and well pulverized, from eighteen inches to two feet in depth, and raked off smoothly on the top. I then cut in two, lengthwise, the largest and best seed I can procure, and lay them on the top of the ground eight inches apart,

in rows twelve inches asunder, and cover them from twelve to eighteen inches deep with leaves. It is best to put the leaves on just before a rain, or throw some loose brush over them, which may be removed when they are settled down, so that the wind will not blow them away. No further attention is required to make the crop.

When the potatoes are wanted for summer use, the leaves may be raised and the best matured tubers taken away without disturbing those not yet grown.

The largest, most mealy, and best flavored potatoes I have eaten were raised in this way; and the yield is so great as to surpass credulity, except with those who have witnessed it. Try it, everybody. It will pay you thrice—first, in the largeness of your crop; secondly, in the superiority of your potatoes; and thirdly, in the improvement of your soil. It is best adapted to garden culture, but may be used profitably in the field. Now is the time to gather and preserve the leaves.

SYLVANUS.

MT. VERNON, Posey Co., Ind.

—Gazette.

#### Heavy Spade vs. Light Fork.

LITTLE stands have been made about the farm by manufacturers, who take advantage of the agricultural gathering at Tiptree to display such tools and implements as are thought worth displaying. The stand is made over a patch of the hardest soil, a spade is taken, and it is found that with much effort it is simply impossible to dig with it efficiently in soil so hard. The man then takes a light fork, weighing two pounds less than the agricultural fork commonly put into the hands of laborers. Its five narrow prongs are of cast steel, and it is completed of one solid piece without joint or weld. With this fork the man proceeds to dig with wonderful facility the heavy stony soil. The prongs of such forks yield place to the stones, and bend round them, loosening the soil, springing instantly, when withdrawn, into their original form.

A match was on one occasion tried between two workmen, one of whom used the old-fashioned, rigid, and broad-bladed fork, the other used one of these light implements (Winton Parkes' they are called) with narrow tines of elastic steel. The man with the light fork earned four shillings, while

the other was earning two shillings and three pence, and the heavy fork after the match required an outlay of sixpence for repairs. The savings in repairs and renovation pay for the light fork several times in the course of a year, and in labor the saving is so great, that a man using this fork is said to lift—by the saving of two pounds in each effort—five tons less in the course of a day's work than his old-fashioned neighbor. Some of these forks are made still lighter for the use of children, who can earn good day wages by the use of them at twelve-inch trenching. These forks were regarded as playthings by the men when they were first brought to Tiptree, but it was soon found that whoever could get one of them to use was saved twenty per cent. of labor, and was able to perform his work more thoroughly than it could otherwise be done. Thus it appears that there is room for Young Agriculture to display its brains, even upon a pitchfork.—*Dickens' Household Words.*

#### Red Pepper.

ONE of the most useful vegetables in hygiene is red pepper. Especially in warm countries has it been considered invaluable as a stimulant and auxiliary in digestion. Among the Spanish and French races it is used in the largest quantities, and they invariably enjoy most excellent health. Of late, particularly since the cholera visited our state, our planters have begun to discover the virtues of this vegetable, and mingle large quantities of it with the food of their negroes. Considerable attention has been drawn to the selection and cultivation of the best kinds of pepper. Among those who have appreciated the importance of this vegetable is that admirable planter, and exceedingly practical gentleman, Col. Maunsel White, the proprietor of "Deer Range," commonly known as the model sugar plantation. Col. White has introduced the celebrated tobacco red pepper, the very strongest of all peppers, of which he has cultivated a large quantity, with a view of supplying his neighbors, and diffusing it through the state. The tobacco pepper yields a small red pod, less than an inch in length, and longitudinal in shape. It is exceedingly hot, and but a small quantity of it is sufficient to pepper a large dish of food. Owing

to its oleaginous character, Col. White found it impossible to preserve it by drying; but by pouring strong vinegar on it after boiling, he has made a sauce or pepper decoction of it, which possesses in a most concentrated and intense form, all the qualities of the vegetable. A single drop of this sauce will flavor a whole plate of soup or other food. The use of a decoction like this, particularly in preparing the food for laboring persons, would be found exceedingly beneficial in a relaxing climate like this. Col. White has not had a single case of cholera among his large gang of negroes since that disease appeared in the South. He attributes this to the free use of this valuable agent.—*New Orleans Delta.*

#### Pruning Roses.

THE following remarks on pruning will, I trust, prove instructive to the young rose grower. As regards the time for pruning, some recommend autumn or winter, while others advise its being done in the beginning of March. I, as well as most rose growers, like the latter season best. By winter pruning, the buds break in the latter part of the winter, and are almost sure to be cut off by late frosts in March. Pruning effects two objects: it makes compact, handsome trees, free from weak shoots and dead wood, and it increases the amount of floral beauty throughout the summer and autumn. It is susceptible of three divisions—first, long; second, moderate; and third, close pruning. Long pruning is employed for all strong, vigorous, free growing kinds. The consequence of vigorous growing roses being close pruned is, that it will make a quantity of strong shoots, generally springing from the crown close to the stock, and very likely no flower during the whole year—at all events, not until late in autumn.

The proper plan is, to leave from five to eight strong shoots, placed as regularly as possible; to cut them back, so as to have four or five buds of last year's wood, and then carefully to prune away all weak and dead branches. Roses do not flower well in the center of the bush, and therefore that part should be well thinned out, leaving the branches as free of each other as possible. As a general rule, it is not right to cut into the bush below the preceding year's wood;

but when the tree becomes old, it is necessary now and then to cut away a portion of the old wood, which becomes clubbed; and this applies more or less to all rose-trees. It should be removed with a nice small saw, and the wound afterward smoothed over with the pruning-knife. These remarks apply to most of the Hybrid Chinas and Hybrid Bourbons, also some of the Hybrid Provence, Hybrid Perpetuals, and Bourbons.

Moderate pruning consists in using the knife more freely than in the former case; in leaving but two eyes of last year's wood, and in carefully training the branches, so as to make the head round and compact. As roses that require moderate pruning have a greater natural tendency to flower than those of the last mentioned class, a little inattention is not so injurious to them. Under this head may be enumerated the greater part of our newest and best roses, including the Moss, Gallica, Damask, Hybrid Damask, Perpetual, and a great portion of the best Hybrid Perpetuals and Bourbons.

The third method, or close pruning system, is used for those roses which are termed dwarf growers, or that make but little wood. This class is not numerous in comparison with the others, but it contains many of the brightest gems of the rosary. They succeed better on dwarf stock, than on those of four or five feet in height. In some cases they are shy growers, and apt to overflow their strength. This is obviated by close pruning, as the strongest shoots come from the crown; and as it is the interest of the grower to get wood of this class, the last year's shoots should be cut away pretty freely. Under this head may be classed a few of the best Moss Roses, and many Hybrid Perpetuals, Damask Perpetuals, and some of the Bourbon tribe. A few words on Yellow-brier roses, and I have done. Roses of this class are peculiar in their flowering, and therefore require peculiar pruning. They are early bloomers, and make no wood previous to flowering. They generally put forth the leaf and the bud about the same time; it is therefore necessary that as much as possible of last year's wood be retained, particularly the ends of the branches, from whence most of the flowers proceed. The method that must be pursued in order to get as much flowering wood as possible, is not to prune them when other roses are pruned, but

shortly after they have done flowering, leaving three or four branches a little shortened. The rest must be cut well back, when they will make good flowering wood the remainder of the season, and ripen it well.—*J. Mc-Ardell, in Beck's Florist.*

#### Sugar Corn.

In the *Wisconsin Farmer*, Mr. A. H. Platt, of Sheboygan Falls, Wisconsin, recommends Sweet Corn as very superior for fattening hogs. He has, from New Jersey, a large sort of it, as large as the common eight rowed corn. We think that there can be no doubt that he is right; sugar, in food, being an element in the formation of fat. The *Patent Office Report*, 1845, thus speaks of it—"Sweet corn appears like an unripe grain. Its origin is unknown; but it seems to have been used by the aboriginal inhabitants of New England anterior to the settlement of the country. It is a remarkable variety of corn; containing an unusually large proportion of the phosphates (bone-forming materials,) and a large quantity of sugar and gum, with but little starch.

"Its excellence as food in a green state is well known and appreciated. There is double the amount of phosphates in the sweet corn as in the Tuscarora. A crop of sweet corn will take up twice as much of the phosphates as the other variety, and consequently, will sooner exhaust the soil of them; and also, if the soil is deficient, will require more phosphates (bones) to be added." This is an important consideration; for while the phosphates are the most requisite inorganic elements of all our grains, they are naturally the least plentiful, and the most difficult to restore.—*Farmer's Companion.*

#### Special Manures.

MR. SHILLINGSBY, of Clinton, New Jersey, exhibited some ears of White Flint Corn at the Farmers' Club, New York city. This is part of a crop of 178 bushels of ears to the acre. The land had been treated with super-phosphate of lime, applied with the seed in the hill. It was said to be an average specimen of the entire crop, which measured 85 bushels of shelled corn to the acre. By means of the same manure, Mr. Shillingsby raised 900 bushels of carrots on one acre.



## The Vineyard.

### VINEYARD CALENDAR FOR MARCH.

IN the brief directions given last month, almost everything was suggested that it will be necessary to have performed during this month of winds; and if the work have not been already performed, no time should now be lost in completing the preparations for spring there indicated.

*Trenching*—Formed plantations should be completed as soon as practicable; but that portion of the ground which was prepared in the earlier part of the season, so as to have been exposed to the meliorating influences of the frost, will be found to be in much better condition at the planting season.

*Cuttings*—If not all prepared, should be carefully housed in a cellar so soon as taken from the vines, and immediately cut up into lengths and buried, so as to avoid entirely the drying winds of this month.

*Nursery*.—The plants which are to be set or sold, should be early taken out of the ground, assorted, tied in bundles and headed in carefully, to be ready for delivery or carrying to the new plantation without exposure.

#### Grapes in Indiana.

AFTER ordering the back volumes of the *Western Horticultural Review*, a subscriber

at Martinsville, Indiana, writes as follows respecting his vineyard:—

MR. EDITOR:—You desire me to write to you in relation to my grapes. I have but a small vineyard, containing 1,800 vines of the Catawba and Isabella; of which the former does exceedingly well, but the latter is too soft and delicate for our climate. My soil is a warm, deep, sandy loam, with a fair south and south-east exposure. My mode of training is the pyramidal style, which I derived from the *Vine-dresser's Manual*, by Theibaut de Berneaud.

In the year 1849, my vines yielded 1,200 gallons of wine, which was the best wine year I have had since my vines have been old enough to bear; they are now ten years of age.

Last year I had no grapes at all. In the first place, the severe cold of the winter killed the most of the buds, and a frost on the 20th of May killed the balance of the young growth. Yet I have a fine prospect for Catawba grapes this season, if no further damage befall them.

My grapes rot more or less every year, and the best preventive I have found is to keep the surface of the soil perfectly firm and level, so that all the surplus water can flow away; also to destroy the grass and

weeds with a sharp hoe, by scraping lightly over the soil. This is to be done after the grapes are formed. J. D.

REMARKS.—This is indeed a tremendous crop; for though we are not told the amount of land occupied, it may be assumed at two-thirds of an acre, which would make the crop equal to eighteen hundred gallons per acre. Let us hope that our successful rival in this interesting culture will continue to reap a rich reward for his exertions, and that he will favor the readers with further accounts of his methods—perhaps he will explain the pyramidal method of training.—Ed.

Letter from F. A. Michaux.

VAUREAL, near Pontoise, Oct. 27, 1852.

Messrs. Buchanan and Longworth,  
at Cincinnati, Ohio:

SIRS:—It is with much pleasure that I learn from Mr. Lea, that you are engaged in the culture of the vine in the neighborhood of Cincinnati, and that success crowns your efforts in that interesting branch of agriculture. In the village to which, since our great revolution of February, 1848, I have retired, the vine culture has been practiced from time immemorial; but it is too near the range where too low a temperature is often an obstacle to good success. The wine which they make here almost always becomes bad. It is sour, and can be kept only about three years.

When I came to this place, I owned some vineyards in the neighborhood. I found the culture of the vine (in which I had never before engaged) was attended with great cost, and that the heaviest of the expenses was that of stakes to support the shoots. To furnish an arpent (three-fourths of an acre) with them, cost from 750 to 1,000 francs, (from 150 to 200 dollars,) according to the quality of the wood—oak, or willow and poplar. For the half of France the

use of stakes is absolutely necessary. It has resulted from my efforts, that lines of wire can be very usefully and cheaply substituted. If the wire is annealed, it will only rust the first year, and a little during the second; after that, none at all. It will then last from thirty to forty years, while wood will only last from ten to twenty years, according to quality. The employment of wire to sustain the low vines is of immense advantage. It accelerates the ripening of the grape, prevents disease, is infinitely more economical, is easily placed, etc. All these advantages, however, are set forth in the pamphlet which I have the honor to send you.

Since publishing this pamphlet, I have carried my method to perfection. I now dispense with the reel there mentioned and represented in the plate. After the vintage, I detach the wire, lay it on the ground, and then, instead of using the reel, wind the wire of each line around a wooden roller, about eighteen inches long and from two to three inches thick, having as many of these rollers as there are ranges of vines.

My memorial above mentioned will explain everything relating to this new method of supporting vine shoots. It has been found so important and so advantageous, that under the government of Louis Philippe, I publicly received a gold medal, by order of the Minister of Agriculture and Commerce, as a recompense for my discovery. This medal I will send to you, in order, gentlemen, that you will offer it to the Horticultural Society of Cincinnati, to be deposited in their archives, if they are willing, to remain there as a testimony of my respect, and of the wishes I entertain for the prosperity of the vine culture in your state. I will also send some seed of a very beautiful kind of vine, the clusters of which are of a violet color. It is a very good table grape,



and ripens a little later than the Chasselos. —Mr. J. Lea has informed me that you cultivate, for making wine, a kind of grape which grows naturally in the woods, designated, I think, by the name of Summer grape; that the wine you obtain from it is very good.\*

In this connection I should make a remark. It is this: My father, who observed and studied the vegetation of your country, as a botanist, has said that all the wild vines that he observed were diœcious—that is to say, had separate sexual organs, the male and female flowers being always separate, and not, as is the case with the vines of Europe and Asia, united in the same flowers. If this is the case, you ought to have in your vineyards some stocks that never bear fruit. This disadvantage should be overcome by grafting. The graft of the vine should be inserted into the root, rather than into the wood of the stock.

I shall be very happy, gentlemen, to hear of the continuance of your happy success.

Your very humble servant,

F. ANDRÉ MICHAUX.

Messrs. MICHAUX, father and son, were in this country about the beginning of this century, and the botanist was struck with the male blossoms and the unfruitful vines that are frequently found in the woods; but a closer examination is needed to satisfy us that there is any vine of the opposite, or pistillate character. The wild grape is sometimes irregularly diœcious.—ED.

#### Croton Point Vineyard.

ALL have heard of the boasted success of Dr. Underhill, who now supplies the New York market with luscious grapes. The following account of his vineyard is taken from

\* Mr. Michaux must have misunderstood Mr. Lea as to the Summer grape being the variety used in our vineyards; as it is well known the Catawba occupies the chief place.—ED. REVIEW.

Solon Robinson's last Plow. We in the West cannot agree with Solon in thinking the Isabella the best grape.

The cultivation of grapes for the New York market has become an important branch of agricultural industry. The largest vineyard in the state of New York is that of Dr. Underhill, to which we made a visit in the midst of the picking season. This vineyard is two miles above Sing Sing, and about thirty miles from New York, upon a narrow point of land called Croton Point, projecting about a mile and a-half into the Hudson from the eastern shore—the Tappan Sea below, and Haverstraw Bay above—the highest part of the land being near the western extremity, and elevated about fifty feet above the river; the base or neck adjoining the main land is scarcely above spring tides. The point in its widest part may be about two hundred rods; the central portion is quite level—soil, a sandy gravelly loam, with portions of clayey loam. The slopes, which in places are very steep, are quite gravelly. In fact one portion of the vineyard is upon ground from which 20,000 loads of gravel, (cutting down the brow of the hill eighteen feet,) have been carted away to fill up an adjoining swamp.

The vines upon the slopes have a south-eastern exposure; those upon the table land are considerably protected by a belt of forest trees along the north-western shore.—One of the divisions upon the flat, with a soil apparently the most clayey, which was almost surrounded by forest and apple trees, gave the first ripe fruit, beating the warm hill-side by several days. Grapes can be grown below the Highlands upon any soil except one suitable for making brick; and if that was properly drained, particularly with cobble stones under each one of the vines, the stiffest clay need not be excepted. A vineyard must be well drained, or on very dry soil; and above the Highlands, only planted upon southern slopes. Lime, in some form, is indispensable; phosphate of lime, principally used in the form of bone-dust, being the best manure the doctor has ever applied. Guano he has found a great promoter of the rapid growth of wood, and according to his theory, too rapid. The probability is, he used it too freely; if applied in smaller quantities, our opinion is, it

will be found the cheapest and best manure in the world for the vine-dresser.

Upon putting down a young vineyard, the doctor applies twenty or thirty bushels of bone-dust. For manure, he makes a compost of swamp-muck, woods-mold, rich loam, sods, weeds, leaves, grape-cuttings, etc., with stable manure, urine, or yard drainings, and potash. He has applied large quantities of clay to his lighter soil—in one instance, five hundred loads to the acre; but this he thinks an excess. The flavor of the fruit is greatly improved when grown upon suitable soil; grapes grown upon wet, or rich bottom land, bear no comparison in point of excellence of flavor with those grown upon a dry gravel, or rocky knoll, well prepared and properly cultivated. In fact, it is the art of cultivation which has improved the Isabella grape, and made it so much sweeter and more delicate than it was when first known among us. It is now almost entirely free from musk; and for productiveness and good table qualities, it is yet unsurpassed in this latitude. The Catawba is more spicy, but neither so productive nor so hardy as the Isabella, nor is it quite so sweet.

Dr. Underhill has experimented with a great many kinds of foreign and domestic grapes, until he has arrived at the conclusion that the Isabella is the only kind which can be cultivated in open vineyards profitably and securely. In seasons like the present, it is true the Catawba comes to full perfection; but in about one year out of three this variety does not ripen perfectly. This is a serious objection to the latter in our climate, as he thinks unripe grapes are the most unhealthy, and fully ripe ones the most healthy of all the autumnal fruits.

He has about thirty acres in vines, three-fourths of which, we should judge, are Isabella; the remainder Catawba, Alexander, Norton's Seedlings or Lady Grape, Early Black or York Madeira, Croton Cluster, a new seedling which promises to be a good wine grape, and a few other experimental sorts.

Nearly all the ground in these vineyards has been trenched from three to four feet deep; but of late Dr. U. has adopted a different practice in preparing his ground, which is much cheaper, and so far appears to answer nearly as good a purpose. He runs a turning plow, fourteen inches deep,

following with a subsoil plow, about the same depth. Upon land naturally dry enough not to require under-draining, this plan will save great expense; trenching with spades being a very laborious undertaking. Plants should be two to four years old when set, and the rows generally about five or six feet apart, the vines in the row the same distance apart—some of his plats have only 750 vines to the acre. In the Cincinnati vineyards 2,500 vines per acre are sometimes grown, the rows only four feet apart. Some of the doctor's rows are nine feet apart; but that he considers a waste of ground, the vines not requiring all the space, and nothing else can be profitably grown between them after they attain their full size. It is common in a young vineyard to plant corn, potatoes, turnips, etc., for two or three years. From such crops he has made, with scarcely any more labor than would have been devoted to the vines, forty-eight bushels of corn or 100 bushels of potatoes; and in other instances, twenty large loads of turnips; the bone manure materially benefiting the crops.

Trellising may be commenced as soon as the vines are planted. At each end of the row, say one to two hundred yards apart, a chestnut post, of eight inches diameter is planted, four feet in the ground, and six or seven above. The intermediate posts are not quite so large, and not always so deeply set. They are of the same durable timber, and will last thirty years, or more probably. They are set from eight to fifteen feet apart, supporting three lines of No. 11 wire, attached by nails. The first wire is three to four feet above the ground, and the space above equally divided—some lines of posts being seven feet high.

The cost of posts average about twenty cents each, and trellising an acre, \$250 to \$300. His first trellising was done with swamp cedar posts, not so large nor so long.

*Cultivation.*—Light plows or cultivators which will stir the soil three to six inches deep, are used early in the spring, and kept going until the fruit is perfected; the rule being, if you wish to make good grapes, the more air and sunshine turned under and mixed with the soil, the better will be the crop, both in quantity and quality. It is no matter how much the surface roots are broken, and with this constant stirring of the soil, it matters but little how dry the season

is. In fact, grapes can stand a greater drought than any other crop, and are, perhaps, more easily injured by excessive wet seasons than other fruits, or products of the farm or garden.

Spare the knife and spoil the grapes, may be adopted by all vine-dressers, as a standing rule. Dr. U. does not trim the leaves, to let in sun and light to perfect all the bunches set, but he trims the bunches; sacrificing during the months of June and July, from one-half to four-fifths of all then on the vines. This increases the size of those remaining, and greatly adds to their sweetness. Where grapes are grown for sale, with a view to the greatest profit, without reference to quality, this excessive pruning of bunches should not be adopted. It seems, however, to have been the purpose of Dr. Underhill for many years, to make his vineyard profitable by producing fruit of superior excellence, which would sell for a high price as soon as its reputation became well established in the New York market. In this he has been fully successful. His vineyards are so much more profitable than a

very handsome orchard of winter pippin apples, he regrets having planted it; and has in another case, demolished a number of fine large apple-trees on account of their proximity and injury to the vineyard.

The only advantage possessed by this location of the Croton Point vineyard, over many other places in Westchester county, is in being nearly surrounded by water, which acts in some degree as a safeguard against frost.

The gathering of grapes, either for wine or market, requires great skill and judgment, which can only be acquired by long practice. At first, only here and there can be found a bunch fully ripe, although to an unpracticed eye, all appear so. Bunches should be cut, not pulled, from the vines, and laid carefully in baskets, and carried by hand or on a spring cart to the sorting room. Beneficial as sunshine is for grapes on the vine, they should never be much exposed to it after they are gathered, particularly if fully ripe; and they never should be taken from the vines in a wet day nor while the dew is on.

## Miscellaneous.

### REVIEW OF THE REVIEW.

MR. EDITOR:—My pen was called into requisition for you last month; but finding the field partly occupied by another, I have held back, hoping to see him fill the post with honor to himself and profit to us readers.

The opening year brought us in another welcome visitant from you; which we greet with pleasure and open with interest, well assured that we shall not be disappointed in our search for instruction in some branch of our favorite pursuit. We are well pleased to learn from your pages, that the prospect before us is cheered by the increasing interest shown by the friends and lovers of fruits and flowers. This must and should

be so, and is manifested by the increasing number of serials devoted to rural affairs, each disseminating valuable knowledge. Every horticultural show of plants, fruits, and flowers will improve the taste of some, and awaken in others, the hitherto dormant spark in breasts which could not conceive that simple flowers could contribute so much happiness. The inquirer then feels that more knowledge of the cultivation of plants is necessary; and horticultural information is eagerly sought, where it can best be found, in just such a serial as this of yours, to keep the inquirer posted up in the current literature, and indicate the sources of standard information. Besides, your West-

ern work applies especially to our wants and our means and methods.

All who have ever traversed the Alleghanies in midsummer, and witnessed the splendid show of beautiful flowers which the Rhododendrons and Kalmias never fail to present, will read with interest the directions for their culture given by the venerable D. Thomas, of New York. By means of the judicious selection and preparation of the soil he recommends, they may have the very great pleasure of reviving the enjoyment of previous impressions of nature, received from the natural visions of this beautiful class of plants.

In the January Number, your attention was directed to the embellishment of grounds by the introduction of evergreens and other native forest trees, many of which have been too long overlooked by planters of trees, in the rage for foreign introductions. The expression, "our American evergreens are superb," can not be too often repeated, and I am truly glad they are now receiving their just meed of praise. Look at our upright Pines, and the still more beautiful Hemlocks, with gracefully drooping branches. Let us thus try first our own native productions, and when our grounds shall be well provided with the proper and natural tenants of the soil, fill in, and use for effective contrast and combination the imported foreigner. But, alas! how few of our noble trees do we find in the nurseries, to enable us to do such patriotic planting!

*Pomology.*—The fruit report from Kentucky is characterized by that plain good sense, and shrewd, clear observations, that mark everything from its author. I am glad you have reproduced the Fruit Lists of the American Pomological Society, an institution which is destined to do great good in sifting the very extended indices of the sys-

tematic fruit books and catalogues of nurserymen. Let us hope that the state fruit committees will be judiciously filled up by the respective chairmen, and that their reports in 1864 will be replete with invaluable information. What do you think of French Pears? Your outlines from M. Leroy are magnificent, and with the accompanying descriptions, make one's mouth water as the echos of "rich, vinous, buttery, and melting," pass through the cerebrum.

*The Garden.*—Thank you will many a poor wight, for that article on the Seed Trade you have republished. It is too bad that we must be continually cheated by the seedsmen. Nor do we wish to consider them all scamps; they are among us, and of us—our neighbors and friends. Can they not find honest wholesale dealers from whom to obtain their supplies? If not, it is high time that some of our market gardeners should associate themselves for the purpose of producing their own seeds, and supplying the surplus to the trade. It is understood that such an arrangement has been established in the Eastern cities.

*The Vineyard.*—The grape report of Dr. Mosher will be read eagerly by those who are anxiously waiting the result of the numerous trials of different grapes made by Mr. Longworth. Many were much amused with the apostrophe, "O Nicholas! great leader of the vine-dressers!" Well, honor to whom honor is due. It is right that his name should be associated with your Review, identified with it as it is, and handed down to future generations as the friend of Horticulture whose liberality encouraged the work—without whom, indeed, we suppose it would never have existed.

*Meteorology.*—I am glad you assign an important place to this very important subject of the natural history of our globe. Climatic influences must exert a most pow-

erful influence upon plants. Dr. Engelmann's and Mr. Lea's tables are invaluable.

Ah, here comes the February Number! which shall receive a passing notice, because it has points about it to admire. *Inprimis*: I like the Frontispiece—a very pretty, neat and commodious house; and the short description of the plan of Evergreen Hamlet gives one an idea of the method in which citizens may very cheaply and pleasantly become participants in the delights of rural enjoyment. The pomological department of this Number is quite extended, but full of practical interest. Your Coopers and Nonpareils are quite captivating, and will no doubt be sought after at the next State Fair with great avidity. "Better than the best" is indeed a high note of praise from your note-book, when taken beside the *Hawley* and others like it.

When shall we ever see a collection of those curious Orchids about which your correspondent discourses so learnedly? While the green-houses, and stoves, and graperies are receiving a large share of attention from those whose means enable them to attain so high, pray do not forget the many, dear Mr. Editor, who depend for their enjoyment upon the simple garden, the border, the parterre, and the truck-patch, or farmer's garden. After all, is it not one of the most important portions of the farm? Some of us think so, and we hope you will ever bear our wants in mind. Do not forget to remind the countrymen of the important products of the garden, which not only contribute to the support of the family in a large degree, but promote health also, and at the same time encourage the female inmates to plant the gentle flowers—to train the embowering vine. What riches of contentment, pleasure and happiness they impart! and who is there in this happy country, in cabin too lowly, or with poverty too ex-

treme, to enjoy these riches? If any, it must be poverty of the simple taste for nature, and of the slender knowledge to enable them to produce the desired effect.

Please remember in future, while you preserve my *incognito*, to insert my Hellenic signature, before omitted.

Kpito.

#### Desecration of Nature's Temple.

NIAGARA FALLS are actually to be converted into a "water-power," according to one of our exchanges. And who has the boldness thus to profane the holiest, sublimest temple of nature? Who has the temerity thus to "rush in where angels fear to tread?"—"Eastern capitalists" these vandals are termed. Yankees have a habit of taking a utilitarian view of all subjects. They sacrifice but little to mere sentiment, and are ever disposed to make everything subservient to the purposes of practical life. We respect their enterprise and appreciate their contributions to the useful. But we would most decidedly have preferred that they should have found a "water-power" somewhere else. This sublime cataract—the most remarkable in the world—should have been left in all its original grandeur, unvexed by the hum of machinery, as a temple of nature, to which her worshipers from all quarters of the globe might make their pilgrimages, and upon whose altar they might offer up their adorations.

But if this "improvement" must go forward, we ask in behalf of the students of nature, of these "Eastern capitalists," that they will terminate their canal as far below the falls as possible, that their machinery may be placed at least out in the *vestibule* of nature's temple, instead of being erected in its inner courts. Please do grant this petition, gentlemen.—*New York Farmer*.

#### The Sunflower.

THE Sunflower is a plant of much greater value than is generally known. Its seed is wholesome and nutritious food for poultry, cattle and hogs, and is very much relished by them. From the seed an oil is obtained with great facility, as delicate, it is believed, as that of the olive.

## Editorial.

### VARIOUS ITEMS.

#### The Frontispiece.

THROUGH the kindness of our horticultural friend, P. S. BUSH, Esq., of Covington, Kentucky, we have been enabled to present with this Number a representation of the great Baptist Theological Institution of the West.

Of this establishment it may happily be said, that it contains its own endowment to a great degree, owing to the liberal views of its early managers, who made an extensive purchase of ground that has since yielded, by sales at increased value, a handsome surplus for its support; and further, it is no doubt a happy consideration to its managers, that it has been enabled to aid largely in contributing to the rapidly increasing prosperity of our sister city of Covington.

The building is plain, commodious and substantial, occupying part of a large block of land which has been very extensively planted with a great variety of evergreens and ornamental shrubbery; and it is only to be regretted that the artist did not venture, with prophetic pencil, to figure forth their future beauties as they will one day wave in this *campus* or park, furnishing classic shade for the many devoted students who may here qualify themselves for an extended field of usefulness.

The professors now engaged in the Institute are Rev. Samuel W. Lynd, D.D., President, and Professor of the department of Systematic and Pastoral Theology; Rev. Asa Drury, Professor of Ecclesiastical History and Greek Literature; Rev. Periander C. Scott, Professor of Languages; Robert H. Baker, Professor of Mathematics. There is but one session a-year, commencing on the third Thursday in September, and clos-

ing on the third Wednesday in June, on which day the public exercises of the annual commencement take place. The Library is very select. There is one society among the students, styled "The Fraternity," the object of which is the improvement of its members in piety and religious knowledge.

#### Culture of the Potato—Addendum.

SINCE the portion of this Number containing the above article was printed, I have learned a fact with regard to the Sugar Cane, which is confirmatory of the views of Mr. Goodrich, as to the effect of removing tropical plants beyond their natural range, and also confirmatory of his excellent suggestions for their restoration, as in the case of the potato, by seed.

An intelligent gentleman who has spent some time in the most favorable sugar district of Louisiana, has informed me that the planters have observed a deficient vitality to occur in the cane plants occasionally. It is manifested by a blackness or discoloration about the joints, and a want of development of the buds which are there placed. It may not be known to Northern readers, that this crop is propagated by planting in the furrow thrifty stalks of cane of the previous year's growth, which is carefully protected from frost during the winter, and which vegetates in the mellow soil, sending up a plant from every joint. This is called "seed-cane."—The plants are all propagated in this way, by *extension*, as the vegetable physiologist would say; for the cane is there so near its northern limit of growth, that though it produces a fine yield of rich juice, it never per-

fects any seed. The planters finding, every few years, this diseased condition spoiling their seed-cane, have found it necessary to send to the island of Cuba for seeds, which there mature; and from this source they renew their stock of cane to furnish the supply whence to plant their fields.

#### Acknowledgments,

ARE due to my accomplished friend, Dr. VATTIER, Senator from this county, for public documents showing the progress of affairs in our great state. Among them, his own bill for establishing a Bureau of Statistics in Ohio is an important movement, worthy of its originator. I have now further to acknowledge the receipt of the annual reports of the trustees for the benevolent Institutions for the Blind and for Lunatics, which present the philanthropy of the state in such a favorable point of view as should exist in a Christian community. The wants of the latter, however, are great, and need greatly extended care. Why is it that this county, with its preponderating population of citizens and taxable property, and its large number of suffering lunatics and many advantages for their treatment, should not have received a share of the public patronage to be appropriated to their support?—The answer lies beyond my unsophisticated ken.

#### NOTICES.

##### Farmer's Companion.

THE first and second Number of this spirited monthly quarto, from the Peninsular State, have been received, and they will no doubt give great satisfaction to their numerous readers, for numerous they should certainly be, while such a work is furnished them "at the very low price of fifty cents a-year," and while such a work of sixteen pages monthly is compiled and prepared,

not, like many other works of the same character, by one poor distracted editor upon his forlorn tripod, but by the triple agency of a very living tripod of editors, each shoulder to shoulder urging on the work, and bearing triumphantly as corresponding editor an agriculturist of whom Michigan may well be proud. The pages are well filled with valuable matter—paper, type and execution good, unless we might suggest that the size of the type is diminished too much, for the sake of admitting an increased amount of matter.

The field is large: till it well, my friends, and you shall gather abundantly of the sheaves, where with willing hands ye are bountifully sowing the seeds of important agricultural knowledge.

An extra of this work contains a premium list of the Michigan State Fair, to be awarded at Detroit on the 28th of next September. Among the premiums I am pleased to see a large number of books offered. The Western Horticultural Review occupies a favorable position among them. This is highly gratifying, for having many excellent friends in that state, I am naturally anxious to increase their number.

##### The Western Plow-Boy,

"A CHRONICLE OF RURAL AFFAIRS."—

Numbers one and two of this new claimant of the farmer's attention have made their appearance from Fort Wayne, Indiana.—Well done, sister state!—throw valuable information freely before your people, especially your agricultural population. Would that I could also say, Well done, yeomanry of Indiana, to have advanced so rapidly, as to demand another periodical of this character. Perhaps it is so; in which case, all will rejoice. At any rate, all should rejoice that in addition to the Indiana Farmer, the Western Plow-Boy now comes holding up

his flambeau to illumine the pathway of his brother farmers, for they at least will be the gainers, whether they who toil for them are rewarded or not. The numbers before us contain a good assortment of communications, editorials, selections, and advertisements.

The Western Plow-Boy, of sixteen pages octavo, is published at Fort Wayne, Indiana, on the first and middle of each month, by R. D. Turner and J. P. Jenks, at \$1.00 a-year, in advance.

#### The Farmer and Planter.

THIS pleasant monthly visitant, from Pendleton, South Carolina, makes its appearance, doubly welcome by the pretty compliments Messrs. Seaborn and Gilman have been pleased to pay to my other self in horticulture, the Western Horticultural Review. They acknowledge, however, having neglected an early notice; for which they are freely granted absolution, especially as they say to their friends and readers—"If you want the neatest, cheapest, and most reliable work on the various subjects of which it treats, send your three dollars forthwith, to"—etc., etc. Would that the "friends" of the Farmer and Planter were as many as the sands of the sea, and that a tithe of them would heed this kindly advice.

The appearance of the added advertising sheet, gives evidence that the Farmer and Planter is in a prospering condition upon the opening of its fourth volume. It is issued monthly, at one dollar a-year, and contains much useful matter to Southern planters.

#### Prairie Farmer.

THIS ancient Western adviser, which has stood in the vanguard for twelve long years, freely offering its aid and advice to the farmers of the North-west as they emerged from the wilderness of a forest and prairie

settlement, until now they stand forth among the proudest and most successful agriculturists of our country, now makes her thirteenth salutatory to an extensive class of readers. With the new year this monthly sheet has assumed an improved dress and appearance, which, by the by, according to the notions of many, have been long wanted. The truth of the old adage, that many hands make light work, is generally conceded, so that in this work many have supposed the labors of its triple corps of editors must indeed have been light and pleasant. Theory and practice do not always agree, however, as will be admitted by Mr. Wight, whom all will be pleased to see again upon the tripod, ably assisted and supported in the horticultural department by the whole-souled intellect of that noble friend of Western agriculture, John A. Kennicott, who throws a halo of brightness around every subject he touches.

From his salutatory in the January Number, I can not forbear making the following extract:—

Labor, and sweat, and patient hopeful care, are indispensable requisites in horticulture. Let this never be forgotten. Knowledge and skill, without these, are entirely useless.

The practice of horticulture, from the days of Adam down to the present time, has marked the civilization, taste, and prosperity of nations. All history shows us, that this art, more than all others, has been the true mirror of healthy progress and refinement; and only sank, when its grateful pleasures became the last refuge of wanton wealth and luxury, and indolent irresponsible power.

Of all desires, of all pleasures, of all mental or physical wants or wishes—the cultivated enjoyment of practical horticulture is the only one that never palls upon the senses, or leaves behind a single feeling of satiety or disgust, or one remorseful regret, upon the conscience of erring man. The great, the wise, and the good have followed it in all ages, and, at the present



time, some knowledge of its principles and practice is essential to a "polite and liberal," as well as a useful and practical education. The first employment devised in heaven, it is the one—when joined to a high religious hope—that brings man nearest to his God, and gives him some foretaste of the pure pleasures of THE FUTURE.

#### Wisconsin Farmer.

JANESVILLE, Wisconsin; Mark Miller, editor; twenty-four pages monthly, fifty cents per annum, in advance. A neat, little farmer's journal, characteristic of the snug and thrifty enterprising Yankees who, pursuing the law of emigration, have passed along their own parallel of latitude to their promised El Dorado.

I sincerely hope that Mark Miller is a successful publisher, and that the people of Wisconsin will appreciate the efforts he is making in their behalf, and sustain him accordingly; for, *certainly*, he is a *successful* editor, not only selecting with judgment, but preparing the most excellent practical, original matter for his readers; and withal, he has the happiest method of presenting to his readers a flattering notice of the Western Horticultural Review, rivaling in this respect even his formidable competitor, the *Prairie Farmer*, of Chicago.

#### Southern Planter's Almanac.

T. AFFLECK, of Mississippi, has again favored me with a copy of his excellent annual, which is well arranged, and admirably adapted to the wants of the Southern planters. His knowledge of fruits, and devotion to the interests of horticulture, have insured attention to this department.

This Almanac is also a favorite advertising medium, and the readers are thus brought into contact with many with whom they wish to deal. It is a matter of regret that friend Affleck had not found a corner for apprising his thousands of readers that the

Western Horticultural Review is adapted to their wants, and would aid them in the culture of their gardens.

#### An Agricultural Address.

OHIO and Switzerland counties, in Indiana, have united in fraternal endeavor to mend each other's manners in matters agricultural, and to vie with other in the products of the soil. In this way they constitute a permanent society in our sister state, and their report will take an important position in the transactions of the state board. The address at the last fair held at Rising Sun, was delivered by B. F. Morris, and contains much good advice and valuable statistics.

#### Massachusetts Horticultural Society.

REPORT FOR 1852.—Thanks to Eben Wight, corresponding secretary, for a copy of this bulletin, which contains the reports and awards of last year's committees on gardens, flowers, fruits and vegetables; from which it appears that there is very active competition for the liberal prizes offered. The schedule of prizes for 1853 is also printed in this pamphlet—amount, \$2,520.

#### Delaware County Institute of Science.

THE Report of the Committee of the Seventh Annual Exhibition, held last September, has made its appearance in a pamphlet of 26 pages. This county of Pennsylvania is much admired by all visitors, and is famous for its fine farms, beautiful herds, snug homesteads overshadowed by stately trees and surrounded by neat gardens and productive orchards, and more than all, peopled by a sturdy, steady and industrious race, equally remarkable for their continued advance and progress. It is true, with their Quaker parentage, they started in advance of some neighboring counties, and as shown in their Transactions, they are determined to keep in the van.

## METEOROLOGICAL TABLE.

CINCINNATI, JANUARY, 1853.

THERMOMETER.			WEATHER.			RAIN.	SNOW.	Date.	WINDS, ETC.
Date.	Min.	Max.	Sunrise.	Noon.	Sunset.				
1	35	38	cloudy..	cloudy..	cloudy..	....	....	1	Light W.
2	34	43	do.....	clear....	do.....	....	....	2	Light S. and SE.
3	38	41	fog, clear	cloudy..	do.....	10	....	3	Calm; light N.; brisk NE.
4	33	34	cloudy....	do.....	do.....	....	....	4	Light N.
5	31	34	do.....	variable	clear....	....	....	5	Calm; light SE.; light NW.
6	28	39	do.....	clear....	do.....	....	....	6	Calm; light W.; variable; light S.
7	32	52	clear....	do.....	do.....	....	....	7	Calm; light S.
8	33	55	fog, clear	do.....	do.....	....	....	8	Calm; light SE.; calm.
9	41	60	do.....	do.....	do.....	....	....	9	Calm; calm.
10	40	58	fog, cloudy	variable	do.....	....	....	10	Calm; light SE.; calm.
11	49	54	fog, rain..	rain.....	rain.....	67	....	11	Calm; calm; light NE.
12	37	38	cloudy....	cloudy..	cloudy..	....	....	12	Light N.
13	36	38	rain.....	drizzle..	drizzle..	18	....	13	Light N.
14	37	38	fog, cloudy	cloudy..	cloudy..	....	....	14	Calm; light W.
15	35	37	cloudy....	do.....	do.....	....	....	15	Light NW. and W.
16	26	31	clear....	clear....	clear....	....	....	16	Light N.; calm at eve.
17	19	32	do.....	clear....	do.....	....	....	17	Calm; light S. and SW.
18	26	30	cloudy....	clear....	variable..	....	....	18	Brisk W. and NW.
19	23	34	fog, clear	clear....	clear....	....	....	19	Calm; light SW.
20	24	44	clear....	clear....	do.....	....	....	20	Calm; light SW.
21	30	47	fog, clear	clear....	variable..	....	....	21	Calm; light SW. and S.
22	22	39	fog, cloudy	snow....	rain.....	20	....	22	Calm; light SW. and SE.
23	34	37	cloudy....	cloudy..	snow, r'n.	23	1	23	Light S.; brisk SW.; snow melted.
24	33	43	do.....	variable	cloudy..	....	....	24	Brisk NW.
25	33	39	do.....	clear....	clear....	....	....	25	Brisk SW.; W. and NW.; high NW.
26	11	19	clear....	clear....	do.....	....	....	26	High NW.; brisk W.; light W. Canals [frozen.
27	14	31	variable..	do.....	do.....	....	....	27	Calm; light S.
28	23	42	clear....	do.....	do.....	....	....	28	Calm; light S.
29	28	51	fog, clear	variable	do.....	....	....	29	Light S. and SE.
30	34	50	do.....	clear....	do.....	....	....	30	Calm; light W.; calm.
31	29	52	do.....	do.....	do.....	....	....	31	Calm; light SW.; calm.
Rain and snow water, inches,						1.43	1		
Lowest temperature, .....						11-00			
Highest temperature, .....						60-00			
Range, .....						49-00			
Mean temperature of the month, .....						36-02			
do. do. January, 1852, .....						28-06			
do. do. do. 1851, .....						36-38			
do. do. do. 1850, .....						37-07			
do. do. do. 1849, .....						32-73			
do. do. do. 1848, .....						39-03			
do. do. do. 1847, .....						31-64			
do. do. do. 1846, .....						39-15			
do. do. do. 1845, .....						34-10			

## Rain at Columbus.

REV. E. GREENWALT has furnished the State Journal with the measurement of the rain gauge for 1852, in Columbus, kept for the Smithsonian Institute. The quantity is as follows:

January, 1.22 in.	July, 2.74 in.
February, 3.52 in.	August, 3.16 in.
March, 3.32 in.	September, 4.22 in.
April, 5.52 in.	October, 3.21 in.
May, 4.36 in.	November, 5.32 in.
June, 2.49 in.	December, 8.69 in.

Total for the year  $47\frac{1}{2}$  inches. This is at least  $7\frac{1}{2}$  inches more, we believe, than usually falls in one year, in this region; and this excess may all be set down to the month of December.

CHARCOAL.—Charcoal should never be used in a sleeping room, unless in a grate; it is very deleterious, frequently destroying life when not used with great caution. It is very hurtful in a close room.



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No. 7.

## Miscellaneous.

### THE STRAWBERRY BOY.

THE following simple and unvarnished story is strictly true. It is given as a horticultural item, to illustrate the progress in early life, of a young Horticulturist, in that branch of industry.

Fourteen years ago last May, on a Saturday at noon, a boy called at my dwelling-house, to sell strawberries. He was of slender form, apparently about fourteen years of age, with a bright and intelligent countenance. The fruit was beautiful and tempting, but I had bought enough at market in the morning for dinner and for tea, and refused to purchase more. He observed that his strawberries had just been picked from the vines, and would keep for Sunday. My wife was much pleased with his gentle and pleasant manners, and decided at once to purchase, and to engage a daily supply from him for the season. Upon inquiry we learned that with his father and a young brother, he cultivated vegetables and fruit to sell in the Cincinnati market, on a small place, near Newport, Kentucky; that he had a taste for horticulture and for

books, and that no effort was spared to improve his knowledge in both. In summer he cultivated the soil, in winter the *mind*.

For three years we were regularly supplied by this boy, from the earliest to the latest period of the season, with strawberries freshly gathered, of fine quality, and at moderate prices; then with raspberries in succession.

The fourth year we "missed him on his accustomed round," and feared that we should see him no more. My wife felt disappointed, and grieved a good deal about it.

He was so intelligent and obliging, so gentle and engaging in his manners that she had taken great fancy to him. Besides all this, where could we supply our table with such fine strawberries, brought daily to the house? Various inquiries were made, but nothing could be heard of him. She only knew his Christian name; the other, if she had ever heard it, had escaped her memory. She recollected to have observed an occasional hectic flush upon his cheek, and feared that the fell destroyer, consumption,

had marked him for its own. Poor boy, said she, we shall never see him again, he has run his race, and will soon be forgotten.

Years passed away, and we had ceased to speak of him, when one day a young man of genteel appearance called at my store, and presenting his hand, asked if I remembered him. In the hurry and bustle of active business life, one forms so many acquaintances, that it is not easy to recollect every name or face at first sight. I therefore answered that I did not. He replied, that when a boy he used to supply us with strawberries, and then he inquired kindly about my wife and children.

He stated that by diligence in his horticultural pursuits, he had saved some money, and was then interested in a small store in a neighboring town. I was delighted to see him, and to hear of his prosperity, and gave him a cordial invitation to my house, but he pleaded want of time and departed. On reaching home in the evening, my wife was much pleased to hear that her young friend the "Strawberry Boy" was living and well, but felt rather slighted by his not calling to see her.

Two years ago, when I saw him again, he was comparatively rich, worth some fifty thousand dollars—had married the daughter of a late distinguished lawyer—had purchased and was then residing in his fine mansion, in one of the cities immediately opposite our own. Occupied in business of public trust and responsibility, he lives respected and esteemed by all his neighbors. He is well known to many of our citizens of Cincinnati. With all this prosperity, he has the good sense to remember that he was once the "little Strawberry Boy," and no doubt he feels prouder of being the architect of his own fortune, from that foundation, than if he had inherited ten times as much from his ancestors.

B.

#### Chemical Analysis of Soils.

THE following remarks in support of scientific examinations of soils, were furnished to the Ohio Statesman, by a devoted and practical geologist, well known in the West as DAVID CHRISTY. It is refreshing to find a man of science stepping forward in defense of these chemical examinations, which have been unfortunately attacked by those who should have proved their ablest defenders, a portion of the agricultural press. On the other hand, the agriculturist can not be too cautious respecting those who voluntarily offer their services in this delicate affair; a cheap analysis is almost universally a bad one, contributing very little to the advancement of true science, sometimes impeding that advance, and always liable to check the progress of scientific inquiry in consequence of the unsatisfactory results that are likely to follow. Mr. Christy's views respecting the geological relations of agricultural chemistry, are almost precisely the same as those I had the pleasure to present last October to the Agricultural Society, at London, Ohio. I am gratified with his concurrence. It should also be borne in mind, that he who undertakes the office of agricultural chemist, should also understand the wants and bearings of practical agriculture.

*Messrs. Editors:*—I have been surprised, recently, to find an effort made by one or two agricultural papers, to decry the chemical analysis of soils. The objection seems to be based, principally, on the fact that great differences in the chemical composition of soils exist in different neighborhoods, and even on the same farms or fields; and, that as the chemical analysis of the soil of one spot can not be a true index to that of others, which differ from it, therefore all chemical analysis is valueless.

The statement as here made, in relation to the difference in the qualities of soils, is true; but, instead of the inference drawn being true or philosophical, it is the very

reverse; as it is this difference in the qualities of soils that makes analysis so indispensable to the agriculturist, in regions where lands are becoming exhausted, or have been worn out.

What now, are the facts? One part of a field, farm or neighborhood, differs from other parts, because its soils have been derived from a different source; the one from the decomposition of rocks, *in place*, another from *drifted* materials brought from a distance, and a third from *alluvial deposits* in the valleys of streams and rivers. One of these soils produces good crops of particular kinds of grain, while another of them fails to do so; but when the crop is changed to some other product, the results are reversed.

What does common sense, aside from philosophy, teach in relation to such cases? Why, that the causes of these results lie in the differences which exist in the chemical properties of the soils, and in the difference in the elements required by different species of vegetables, during their growth. What then, is the remedy? Certainly not to go on eternally *experimenting* like a quack in medicine, but to apply the tests of chemical science at once, to each class of soils, and determine wherein they need to be aided by artificial means. But it is objected that a farmer can not afford to pay the cost of the analysis of a half dozen kinds of soils. Well, let us see wherein true economy lies in such cases as this. Suppose a farmer wishes to fertilize his less productive or worn out soils, and buys the famed *guano* at \$40 per ton; will he not act unwisely in strewing it upon lands that have already enough of *lime* and the *phosphates*, and only need plenty of properly prepared stable manure, or its equivalents, to supply the needful *ammonia* and other elements necessary to render lands abundantly productive? And how is he to ascertain this but by analysis? He can *experiment*, it is true, and may or may not come to just conclusions as to the wants of his soils. But his experiments with *guano*, at the price stated, may prove rather more expensive than if he had paid for a half dozen of analyses, and at once ascertained the true remedies for the sterility of his lands.

A word, however, as to the nature of the soils of our western states. There is a per-

fect system of regularity in our soils, notwithstanding their seeming diversity to the eye of the common observer. The principles of our *system* of soils are well understood by the geologist. Take for example the *sandstones* and *shales* which lie below the *coal formation*, in Pennsylvania, Ohio, Indiana and Illinois, and are several hundred feet in thickness. The materials of this formation have been derived from the North-east. According to the well known laws which govern the transportation of sedimentary matter in water, this formation will be expected to assume more and more of a *calcareous* form, as it extends to the South-west. Investigations has sustained the correctness of this theory. The beds of *sandstones* and *shale* in the hills around Granville and Newark, in Ohio, including well known *fossil shells*, become in Indiana and Illinois, *limestones* and *shale*, or *marlites*, with the same species of fossils. Soils derived from the decomposition of the rocks of this formation, will, of course, be found to grow richer in *lime* the farther west it is examined.

The soils derived from other formations, have also their differences in different localities; but the geologist can distinguish them as easily from each other as the miller can his *fine flour* from the *shorts* or *bran*. It is only by analysis, however, that the chemical properties of any soil can be determined; and when this is done, in a neighborhood, all the soil of the same class that has been tested, may be expected to approximate its properties. A geologist, only, should select the portions to be tested, as he alone can judge of how far the different classes of soils have become *intermingled* in any particular spot.

Should any one be desirous of informing himself on the subject of soils, and their liability of becoming exhausted of elements essential to vegetable and animal growth, they may look into the Tables of Analysis, in the little work on the "Chemistry of Agriculture," which you recently noticed. Take, as an example, *phosphoric acid*, which in combination with *lime*, is the essential element in the formation of *bone*. In the analysis of *soil* specimens of soils and sub-soils, given in that work, the *phosphoric acid*, in no instance, reaches a *half per cent.*; and even when found combined with *lime*,

which is mostly the case, it exceeds a half per cent. only in one instance.

DAVID CHRISTY.

### Scenery in Bengal.

THE groves of Palm-trees with their naked trunks crowned with the richest foliage, give a tropical and magnificent appearance to the landscape. The immense green leaves of the Plantain, surrounding a pithy stem, bending under a load of fruit at all seasons of the year; the green carpet which covers the ground at all times, but which grows with great rapidity during the rainy season; the magnificent shoots of the Bamboos, which rise to the height of forty or fifty feet in a single year; and the Banyans, which extend their mighty arms to such a distance as to require support, a support which nature herself supplies by throwing down props which take root, and finally become trunks and centers themselves of vast spreading thickets; all these give Bengal a character for grandeur and luxuriance which is rarely equaled in other parts of the globe.

The provinces to the north-west, however, have usually a very different appearance. Many tracts of country are barren and sandy in consequence of the long droughts and the scorching influence of the hot winds which prevail for several months in the year. Still, during the rains, vegetation is rapid and luxuriant, and at all times mango groves may be found at almost every town and village, which afford delightful shade and shelter to the traveler who may pitch his tent beneath their branches.—*J. R. Campbell's "Missions in Hindostan."*

### Trees.

WE can not forbear to quote largely from our dear unseen friend, the authoress of *Rural Hours*; she is dear to all, for in whose

heart has she not struck some corresponding chord?

We hope every one of the Vandals, and their name is legion, who delight in the destruction of every tree upon their premises, enjoy the full benefit of a broiling hot August sun pouring down upon their shadeless houses. Ever since we commenced our career as an agricultural writer, we have unceasingly cried, *plant shade trees*; because we have ever held the same views upon this subject as expressed by the writer of the following extracts, whom we are right glad to welcome into our fellowship, as a crusader against the barbarians whose only love of trees is that they may destroy them.

We strike one more blow for the cause now, because now is the time when everybody can see, feel and appreciate the value of shade trees. We have known men to destroy all the trees in their pasture grounds, upon the false, foolish and wicked plea, that their cattle spend too much of their time in the shade when they ought to be engaged in the more profitable employment of eating. Such men may be human, but they certainly are not humane, intelligent or Christian, for a merciful man is merciful to his beast.

Independent of their market price in dollars and cents, trees have other values; they are connected in many ways with the civilization of a country; they have their importance in an intellectual and moral sense. After the first rude stage of progress in a new country—when the shelter and food have been provided—people begin to collect the conveniences and pleasures of a permanent home about their dwellings, and then the farmer generally sets out a few trees before his door. This is very desirable, but it is only the first step in the track; something more is needed, the preservation of fine trees, already standing, makes a further progress, and this point we have not reached. It frequently happens that the same man who yesterday planted some half dozen branchless saplings before his door, will today cut down a noble elm or oak, only a few rods from his house, an object which was in itself a hundredfold more beautiful than any other in his possession.

In very truth, a fine tree near a house is a much greater embellishment than the thickest coat of paint that could be put on

its walls, or a whole row of wooden columns to adorn its front; nay, a large shady tree in a doorway is much more desirable than the most expensive mahogany and velvet sofa in the parlor. Unhappily, our people do not see things in this light. But time is a very essential element, absolutely indispensable, indeed, in true civilization, and in the course of years we shall, it is to be hoped, learn further lessons of this kind. Closer observation will reveal to us the beauty and excellence of simplicity, a quality as yet too little valued or understood in this country; and when we have made this further progress, then we shall take better care of our trees.

We shall not be satisfied with setting out a dozen naked saplings before our door, because our neighbor on the left did so last year, nor cut down a whole wood within a stone's throw of our dwelling, to pay for a Brussels carpet from the same place as our neighbor's on the right; no, we shall not care a stiver for mere show and parade, in any shape whatever, but we shall look at the general proprieties and fitness of things, whether our neighbors to the right or left do or not.

How easy it would be to improve most of the farms in the country by a little attention to the woods and trees, improving their appearance and adding to their market value at the same time. Thinning woods and not blasting them, clearing only such ground as is marked for immediate tillage, preserving the wood on the hill tops and rough side-hills; encouraging a coppice on this or that knoll, permitting bushes and young trees to grow at will along the brook and water-courses; sowing, if need be, a grove on the bank of the pool, such as are found on many of our farms; sparing an elm or two about the spring, with a willow also to overhang the well; planting one or two chestnuts or oaks, or beeches, near the gates or bars, leaving a few others scattered about every field to shade the cattle in summer, as is frequently done, and setting out others in groups or singly to shade the house; how little would be the expense or labor required to accomplish all this, and how desirable would be the result. Assuredly, the pleasing character thus given to a farm and neighborhood is far from being beneath the consideration of a sensible man.

### Hollow Bricks.

YEARS ago hollow walls and hollow bricks were recommended to secure dry and warm walls for houses. The idea was always very attractive, but here the hollow brick is brought before the American reader palpably and decidedly by that excellent Reporter of the World's Fair, Secretary B. P. Johnson, whose account of the Crystal Palace is a valuable contribution to knowledge.

There were several models for making houses fire-proof, but the most important improvement in this respect was the plan of building with hollow bricks. There were exhibitions of these bricks in both the English and French departments. Opposite the Crystal Palace a block of model houses was erected by Prince Albert, a contribution to the exhibition. The peculiarities of the building, which was designed for four families, were the exclusive use of hollow bricks for the walls and partitions, and the entire absence of timber in the floors and roof, which were formed with flat arches of hollow brick-work, which was secured by wrought iron rods connected with cast iron springers resting on the external walls and binding the whole structure together. The building is thus rendered fire-proof, and much more durable than if built in the ordinary manner.

The most important advantages derived from the use of hollow bricks are dryness and warmth, as well as economy of construction. The evils resulting from the absorption of moisture by common bricks and other porous materials are obviated, and the battening of the walls is unnecessary. Hollow bricks may be made with any good tile machine, in the same manner as ordinary draining pipes, and at about the same cost in proportion to the clay used. They are more compressed, require less drying, and with much less fuel are better burned than ordinary bricks, even when waste heat, or that in the upper part of the kiln only, is used.

The saving in brick-work effected by the use of the patent bricks, when made at a fair price, will be from twenty-five to thirty per cent. on their cost, with a reduction

twenty-five per cent. on the quantity of mortar, and a similar saving on the labor, when done by accustomed workmen. The process of drying is much more rapid than in common brick-work, and the smoothness of the internal surface of walls built with the patent burned briek, renders plastering, in many instances, quite unnecessary, whereby a further saving is effected, not only in the first cost, but also in the subsequent maintenance. If glazed on the outer face, as may be done with many clays, a superior finished surface is obtainable without plaster.

#### Hard Cement for Cracks.

A VERY excellent cement for seams in the roofs of houses or in any other exposed places, is made with white lead, dry white sand, and as much oils as will make it into the consistency of putty. This cement gets as hard as any stone in the course of a few weeks. The lead forms a kind of fluid with the sand. It is excellent for filling up cracks in exposed parts of brick buildings; it is also a good cement for pointing up the base of chimneys, where they project through the roof of shingled houses. We have made this cement and tried it, and speak about it from experience only, for we have no knowledge of its ever having been described in any work.

*Another Good Cement.*—Use the above, only employ half whiting and half sand; there should be about four parts of sand and whiting, by weight, to one of lead.

*Another Cement.*—Take and dissolve some alum in a vessel containing water, and while it is in a boiling state, cut up common brown soap into small pieces, and boil it along with the alum for about fifteen minutes. One pound of alum is sufficient for five pounds of soap. The soap becomes sticky, like shoemaker's wax, and can be drawn out in a similar manner. It is now to be mixed with whiting to a proper consistence for filling up seams, etc. It becomes partially hard after a few months, and adheres to wood very tenaciously. It is not easy to put on, and if there be any moisture in the wood it can not be made to adhere at all. When dry it is impervious to and repels water; it is slightly elastic, and has advantages in this respect. To

make it adhere it must be well pressed down. This cement, like the preceding two kinds, is the result of experiments; we have tried it and speak with confidence of its qualities. For the filling up of seams, in parts of wooden buildings exposed to the weather, there can be no doubt of its good qualities, and it is not very expensive. A putty made with whiting and linseed oil, in the common way, if mixed with some white lead, about one-tenth part by weight, we like better than any other cement we ever tried for cracks or seams in wooden buildings, to be applied outside; but it is not elastic like the cement made with soap and alum.

Our readers will be able to choose for themselves which of these cements, if they require any of them, is best adapted for their peculiar purposes.—*Scient. American.*

#### Honey-Bees.

A CORRESPONDENT of the New England Farmer furnishes the following article upon the destruction of bees in winter.

I noticed in your February Number an inquiry as to the cause of the destruction of bees in winter when they have plenty of honey in their hives.

I would like to ask your subscriber if in those hives which he has seen, the bees were not clustered where there was no honey in the comb? I have not the least doubt they were; then the reason is plain. They died from the long continued spell of cold weather; for had they changed their position in the extreme cold weather, it would have been death; so, rather than to break their cluster and let in a chill that would be death to them, they remain and die when honey is almost within their reach. I have noticed many so, and have no doubt that is the cause of their destruction—it is the long continued cold weather that destroys them. Sometimes they die for want of numbers to keep up a proper warmth in the hive; then the anchor frost proves destructive.

Bees should be watched closely in so steady a cold winter as the last one was; and, if you find a swarm that does not answer to the call, carry them in to a good warm fire and warm them up and let them change their position, and let them return to their



place. To have bees winter well, put your swarms into hives of medium size, and a good swarm in that shape is more likely to winter than otherwise.

#### Enlightened Agriculture.

M. P. WILSON's Address, at the New Hampshire State Agricultural Society.

UNDER a system of scientific cultivation, the agricultural products of this state might be doubled without additional expense, and, of course, her capital. You would thus retain the enterprising sons of her yeomanry on the farms of their fathers; those sons who now seek their fortunes in other states, professions and employments. In New England, there is land enough and to spare.—It appears from the recent valuation committee of Massachusetts, that if forest be excluded, not more than one-fourth of her remaining improvable territory is under cultivation. If the other three-fourths were only as highly improved, her agricultural products would be quadrupled; but much of it is capable of higher cultivation, and of producing crops many times larger than the present amount. This would enable her to sustain a population of many millions.—Away, then, with the apprehension that New England cannot sustain, by her agricultural products, her swarming population. She may not only greatly multiply her present crops, but introduce other products equally important with any now under cultivation. What a vast amount of trade has resulted by the introduction of flax from Egypt, which, by recent improvements in mechanical and chemical science, may yet become as important to the free labor of the North as cotton is to the slave labor of the South. What an amount of commerce has been created by the introduction of the mulberry from Eastern Asia into Europe, which gives employment to millions, and clothes other millions with their silken fabrics; by the introduction of the potato from South America, which has for ages fed the famishing millions of Ireland, and the partial loss of which, within a few years, has produced starvation and misery in that ill-fated country, and much pecuniary loss and lamentation through the civilized world; by the introduction of wheat, which gives immense wealth to the rising empire of the West, freights innumerable

cars and ships, and feeds millions in our own and other countries.

Science has already improved our agricultural productions, and will continue to improve them. How much she has done for the potato! Compare the original—small, black, tough and acrid—with our numerous fair, mealy, palatable varieties. How dissimilar in quality, flavor and size! Compare the luscious peaches with the original species, the almond, tough, dry and bitter; our magnificent apples with the scur crab; our plum with the parent sloe. The Bartlett and the Seckle pear, the Green Gage plum, and the Baldwin apple, were produced from accidental seed; but science teaches how to obtain new and valuable sorts, by hybridizing or crossing the existing varieties.

This art depends on the sexual character of plants, which was developed by Linnaeus, one century ago, amidst that ridicule and scorn which so often attach to discoveries, inventions, and new theories in our day.—Our farmers are familiar with facts which develop the principles on which this art depends. They are aware of the necessity of keeping their varieties of corn, squashes, and other grains and fruits separate, lest they should intermix and produce, not each after its kind, but other sorts unlike the original, sometimes as speckled as Jacob's cattle.

But science alone can teach how to turn this law of nature to the highest practical account; and how, by it, to produce new and valuable varieties, adapted to their particular location and climate. By a corresponding law in the animal kingdom, we already have ornithologists who pretend to breed fowls to order, in respect to size, plumage and other qualities; and also among our experienced stock-breeders, some who profess to raise domestic animals with similar exactness. Infinite Wisdom has fixed those laws, and given us faculties to comprehend them, and they must be thoroughly understood before farming can be raised to its legitimate and rightful position. Witness an approximation toward this general result in the improved breeds of our cattle, swine and horses, and in the endless number and variety of fruits and flowers produced the last twenty-five years by artificial impregnation. Thus Mr. Knight, president of the London Horticultural Society, produced the Black Eagle and Elton cherry, the

Dunmore pear, and other new and valuable fruits, perfectly suited to that latitude; and the process is equally applicable to the production of new grasses, grains and vegetables, as to animals, flowers and fruits.

This principle also teaches the art of raising the most valuable seeds, to avoid the immense annual loss of labor and money, from the use of that which either never germinates, or, if it does, produces an inferior crop. Age, which improves some seeds, destroys others, and the art and importance of procuring the best are but imperfectly understood by most of our practical cultivators. We have room but for a single fact. An association of scientific cultivators exists within our knowledge, whose object is to raise seed for each other. The cabbage seed which they raise for themselves, they sell at ten dollars per pound, but that which is raised without this care, is sold for one dollar per pound; hence the former, which is really the cheaper, will not pay a profit, because its superior worth is not understood by our farmers.

#### Phosphate of Lime.

DR. LEE, in the Patent Office Reports, gives good advice on the subject of manures. The Vermont mines of this mineral have been sold to an English company; the New Jersey mines are worked for the home market. Read the Report, and especially the Essay on Manures.

All the crops usually raised contain phosphorus, phosphoric acid or phosphates of lime, potash, etc.

Phosphorus in some shape is therefore *necessary* to vegetation such as we cultivate for crops. It must of course have an existence in all our productive soils, for plants do not create any new substances, they only combine, separate, and extract them.

The ashes of the grain of wheat has 49.81 per cent. of phosphoric acid, of barley 38.93, rye 49.55, Indian corn 44.87, and so on all cereal grains, averaging from 30 to 50 per cent.

This is why phosphate of lime, as well as sulphate of lime (gypsum), and carbonate of lime (limestone), is indispensable to successful farming. Bone earth or pulverized

bones are for this region next in value to guano as a manure.

There are in the United States geological deposits of phosphates of lime that are now turned to account.

In England there are beds of strata of rocks filled with the remains of whales, the bones, scales and teeth of other fishes and bones of reptiles, and also lumps of phosphate of lime. Thousands of tons of this earth are consumed by the English farmers upon their land.

#### Testing Sandstone.

THE following remarks and experiments are deserving of attention by all farmers beginning to improve their dwellings. A large portion of the Western States are situated upon or accessible to the sandstones which constitute a large element in what the geologist denominates the "coal measures;" many layers of these rocks are unfit for building purposes, and here is a convenient and simple process for testing them:

The means of ascertaining the capability of resistance of stone against frost occupied the attention of scientific men at an early period; but, although recent communications have been made on the subject, they are but reproductions of the experiments of the mineralogist Brard. His system, which is that of subjecting stone to the action of Glauber salt, so as to produce a low temperature, has long been adopted as a universal medium in most countries of Europe, and sanctioned by many high authorities.—It is truly observed, however, by Professor Fuchs, in Erdman's Journal, that such a mechanical method is of no more certainty than to rasp the stone with the finger nail, or strike it with a hammer, and that the only competent test is to subject it to chemical analysis.

The builders employed on the royal works at Munich have, in the course of their extensive practice, resorted to this process of analysis in preference to the usual method; and the following is an account of the experiments of M. Stumb, principal builder in that city:

On the occasion of repairing the weather

side of the tower of the Lady Church, at Munich, he instituted an examination into the sandstone of Waakirchen, in the district of Wiesbach. This sandstone is a bluish gray color, equal and fine grain, noways splintery, of moderate hardness, and giving sparks when struck with steel. On a closer inspection, minute specks of mica and quartz may be perceived.

A piece of this stone, weighing thirty and five-eighth ounces, was laid in distilled water for twenty-four hours, and on being taken out and weighed it was found to have increased six grains, hardly two per cent., and affording a good proof of its closeness of formation, and small power of absorption.

The water in which the stone had been laid was evaporated to an ounce, and a yellowish residuum obtained, which, on being subjected to re-agents, was found to consist of sulphate of lime and sulphate of soda, mixed with organic matter.

A piece of sandstone was pulverized, and one hundred grains of it treated with muriatic acid, and a partial dissolution effected by the development of carbonic acid gas.—The remaining acid having been renewed by evaporation, the residuum of quartz sand was washed and cleaned with warm water, and found to weigh fifty-seven grains.

The muriatic residuum was subjected to nitrate of ammonia, whereby alumina was produced, with a portion of oxyd of iron. It weighed, on careful trial,  $3\frac{1}{2}$  grains.

The solution filtered from the aluminous precipitate was treated with oxalic ammonia to produce deposition of the lime, which was exposed to the fire to convert the oxalate of lime into carbonic acid gas, and by which twenty-four grains of carbonate of lime was produced. The fluid filtered from this was acted upon by phosphate of natron, and a precipitate of phosphate of ammonia and magnesia appeared, which by heat was reduced to neutral phosphate of magnesia, which was calculated as thirteen per cent. of carbonate of magnesia.

The composition of the stone, consequently:

Quartz,	- - -	57
Alumina,	- - -	3.5
Carbonate of lime,	- -	24
Carbonate of magnesia,	- -	13
Loss,	- - -	2.5

100

From these results it was proved that the sandstone of Waakirchen was a good building material, and fully capable of resisting the effects of air and water, as its component parts were not liable to decomposition, and its texture did not admit the introduction of their mechanical force.

It is evident that it is only by such trials that the true qualities of materials are to be ascertained, as mere mechanical action, or a trial of temperature, affords no criterion of the chemical constitution by which injuries of weather are caused.

#### Agricultural Education in Michigan.

It appears from the recent papers, that the legislature of this state are about providing some agricultural instruction at the State University. Let it come in what form soever it may, we always welcome this sort of encouragement to agriculture—it is real, and must prove valuable. If, as now proposed in Illinois, the industrial education of the people can be carried on by the state, after establishing a good common school system, it will be well; but do not reject even a side professorship provided by the state, in the university, as in New York and Michigan.

The regents of the university have organized the department, and the following course is announced:

1. Daily lectures on chemistry, (elementary and experimental,) applied to the arts, meteorology and climate.
2. Geology and mineralogy, and the application of the same to mining, drainage, construction of public works, etc., illustrated by specimens from Michigan, the neighboring states, and foreign lands; also models and drawings.
3. Animal and vegetable anatomy and physiology in general, the physiology and diseases of domestic animals in particular, and the structure and habits of insects in reference to grain, trees, and horticultural plants.

4. Organic chemistry and the theory and practice of agriculture, the origin and nature of soils, the different varieties of manure, tillage, tools, etc.

Lectures on these subjects will be given during the next spring and summer term, commencing April 27, and ending June 28.

#### United States Agricultural Society.

A PRIVATE letter received from M. P. Wilder, one of the members of the United States Agricultural Society, says:

"Our session continued two days, and was closed by a lecture on 'Fertilizers,' by Professor Mapes, of New Jersey. It was attended by delegates from twenty states, and everything passed off in the most harmonious manner. The most important business was the adoption of resolutions for petitioning Congress for a State Department of Agriculture, and also for the appropriation which now goes to the agricultural department of the Patent Office; and as a consideration for this, the United States Agricultural Society offers to perform the duties of that department, and thus through the agricultural societies of the country to disseminate whatever might be useful to the farmer. The organization of the society will soon be complete in all the states and territories, and our Journal regularly published. A system of agency will be appointed, to solicit donations and members to the society; of the former we have already had one of \$1,000. The success of our association may now be considered nearly certain; much, however, will depend upon the efforts and approbation of those who guide the public journals."

Since the adjournment of the United States Agricultural Society, their executive committee have met once or twice and transacted a variety of important business.

The appointment of agents in the different sections of the Union, to solicit membership and promote the interests of the Society generally, was assigned to the members of the committee from those sections respectively, as follows:

For New England—Marshall P. Wilder, of Mass.; William S. King, of R. I.; Moses Newall, of Mass.

For New York and New Jersey—Hon. John A. King, of New York.

For Pennsylvania and Delaware—Dr. A. L. Elwin, of Penn.

For Virginia, Maryland and the District of Columbia—C. B. Calvert, Esq., of Maryland.

For North and South Carolina, Georgia and Alabama—Richard Peters, Esq.

For Ohio and Indiana—Dr. Arthur Watts, of Ohio.

For Wisconsin and North-western States—Dr. J. D. Weston, of Wisconsin.

For the rest of the Union—J. C. G. Kennedy, Esq., of the Census Bureau.

The publication of a quarterly periodical of agriculture is contemplated, to be of a national and high-toned character. Prof. Mapes, of New Jersey; Dr. Weston, of Mass.; Drs. Elwyn and Watts, of Penn., and Mr. Calvert, of Maryland, have promised to contribute original articles.

J. C. G. Kennedy, Esq., Corresponding Secretary, is charged with the editorial supervision of this publication, and, from the vast amount of resources at his command in the Census Bureau, he will be able to furnish much valuable information.

It is understood that the views of the President elect are most favorable to the interests of agriculture, and there is reason to believe that he will not be behind his predecessors in his recommendations upon the subject.

The erection of a monument to Downing is contemplated by the farmers and horticulturists, to be located in the Smithsonian Grounds, which already bear the marks of his genius and taste for the beautiful.

#### Notice of the January Number.

*New-Year.*—What period of the year so proper to review the past, or look toward the future, as this conventional epoch in the revolving seasons? Your reflections on this occasion will revive similar ones in the bosoms of many of your readers, indulged in simultaneously with your own, prompting us to cherish, tenderly, the memories of our benefactors who have parted from us within the past year, among whom the names of

Downing and Norton stand brightly prominent. And as we look with hope, brightening into expectation, to the hidden, though not dark future, how natural the question, Who shall fill their vacant places? What will be done by a grateful country to commemorate her appreciation of their labors? True, during the same year, we have lost more prominent men, whose memories will brighten for all time the age in which they lived; the nation *honors herself* in monuments to *them*. But the sphere of *our* dead, conferred the benefits of their labors on the nation through a *class* of her citizens, and upon that class devolves the duty to commemorate their worth. A monument has been suggested to the memory of the lamented Downing, and the suggestion meets with enthusiastic responses from thousands, who have derived pleasure and profit from his laborious life.

The power of *association* must be brought to bear upon this matter, while these generous promptings are fresh in the hearts of the people, or the only monument we shall have of Downing, will be the marks made on the age by his genius, a lasting monument 'tis true, but insufficient, because self-reared.—Would it not be an appropriate memento, to purchase and secure to his family his late residence at Newburg, appropriating a quiet nook—accessible to the public without intruding upon the privacy of the family—to a modest and tasteful monument? This may be done if promptly acted on; systematic action is all that is wanted; let the Horticultural Societies act, let *Horticultural editors* call them to action, and keep them in action, till the work is done.

*Potato Disease*.—This subject, so much written upon, still remains as at first, a mystery. Much learned and unlearned research has been called out by offers of rewards.—In the article under consideration, which seems to be a synopsis of many articles on

the subject, "cutting potatoes (for seed) is decidedly condemned," as tending to produce disease by decreasing the vitality of the seed, and "stable manure condemned as being too strong and heating, producing ill-flavored, unhealthy potatoes." Now here are two suggestions pointing toward a remedy. We know that the potato has been for years submitted to both these causes of disease (if such they are,) a change in the mode of planting and manuring might again restore the plant to health; but the deduction from all the facts stated, is that "the disease has a striking resemblance to cholera!"

*Dwarf Pears*.—The most that cultivators of these trees have been led to expect, has been early fruitfulness and premature decline and death. How delighted they will be to learn from R. Buist that "the quince stock does not impair the longevity of the pear," and to read his account of a lot of trees 100 years old; these little pets become doubly valuable after such statements from such a source.

*Curculio*.—With what interest we read every article under this head, and note each new remedy for trial. Facts are accumulating to prove that *lime, sulphur* and *ammonia* are each offensive if not fatal to him.—Let each cultivator dose him well with these, not forgetting, however, the use of "pigs," "chickens," and "the mallet."

*The Seed Trade*.—Let every dealer in seeds carefully read this article, and let planters refer them to it. We want some reform just here. This article is calculated for our meridian. Of course, *our* seedsmen are honest, but reading this attentively will do them no harm.

*Marine Glue*.—What is it? where obtainable? or how made? If suitable for the purposes suggested by Madam Audouin, it will be of great service to others as well as

gardeners, and answers to these questions will be generally interesting.

*Grape Report on N. Longworth's collection.*  
—Some of the grapes here reported upon promise to be great acquisitions. Nos. 2, 11, 19, 24 and 26, seem deserving of notice. No. 19, "a small, white grape that tastes like the Sweet-water," if hardy, productive, and of good constitution, will be a desirable table grape. No. 24, though not a native, if "as hardy as the Catawba," seems to be worthy of more general culture; and No. 26 would seem from the description to be desirable, "having a pulp as soft and juicy as the Black Hamburg." I hope, if disseminated by Mr. L., he will give it a more independent name than "Imitation Black Hamburg."

*New Method of Supporting Vines in Vineyard Culture,* may be new to the French, but has been in use in this country many years. It looks neat, and saves much trouble in tying up the vines, the tendrils readi-

ly clasping the wire. While on the subject of vines and their products, I must refer to the reports of the *American Wine Growers' Association*, which always interest me.—The notice of their last meeting speaks of it as "this agreeable association." That it must be quite so, is evident to every one who has read their proceedings from time to time, and marked the great range of figures required to designate the samples tested by them; and at this time they have before them more samples than they could get through with in the ordinary course of business, and are compelled to return to Mr. Longworth many specimens for future examination. Happy fellows! with highly cultivated palates, may their specimens still accumulate with a rapid progress from good to better, and long may the members of "this agreeable association" live to lead this branch of culture to its destined position in the front ranks of national importance.

P.



## Pomology.

### THE APPLE ORCHARD.

A VIRGINIA correspondent inquires of us the reason why so many apple-trees in his own orchard, and in those of his neighbors, die young, and asks us at the same time to suggest a preventive against this mortality

among the orchards of his vicinage. The only symptoms mentioned are a dry rot in the roots, and a subsequent perishing of the bark and leaves. It is impossible, from so imperfect a diagnosis, to form any just con-

ception of the cause superinducing this fatality; still, we think it most likely some condition in the soil, or contingency in the seasons, calculated to destroy the small rootlets by the action of heat or cold, has been present in these cases prior to the appearance of disease.

There appeared in our columns, within the last year, a series of articles from the pen of L. Young, Esq., upon the theory of pruning, in which the healthy action of the roots and leaves was treated somewhat in detail, their reciprocal action and reaction, and their mutual dependence pointed out.—From these remarks, and from the general laws of vegetable physiology, it is manifest that neither the rootlets nor leaves can sustain serious injury without such injury resulting in damage to the other set of organs. Thus, for example, if, in consequence of locating the orchard in a retentive clay soil, or if, by reason of heavy and long-continued rains just up to the moment an intensely cold spell in winter, or an unseasonably hot one in summer, begins to take place, the small roots with their spongioles are destroyed; or if, by reason of bad culture, rival plants are left in the orchard, as excessive weed crops or closely matted sward, which intercept the moisture before reaching the rootlets of the apple-tree—in any of these cases, the system of leaves will be affected, and the careful observer will be enabled to measure the extent of the injury by noticing the character of the buds from time to time.

It is a law in vegetable physiology, that in the axilla of every leaf there is a bud, although its development is not always manifest, and in thrifty young trees those buds are generally wood buds: but if from any cause the leaves are poorly supplied with sap, the character of these buds is changed, and fruit buds predominate; or if not fruit buds,

a certain nondescript class which might be termed abortive, as they neither produce wood nor fruit, but (reproducing themselves until diseases carry off the tree, or until from renewed vigor some dormant wood bud breaks forth into a water sprout, forming a new top as though a bud had been inserted) seem to convert every tree thus affected into a dwarf, which obstinately refuses to make further progress in growth.

Many a moss-covered trunk not exceeding one inch in diameter, with a head containing spurs and branches sufficiently numerous to constitute a large tree, may be found in orchards planted in lands not in good heart, and in most such cases examination will prove that there is present a degree of feebleness in the system of the small roots. An interesting experiment illustrative of this principle was communicated to us some years ago by a nursery-man, who saw a particular lot of trees put forth leaves in spring, but become stationary in growth during midsummer, contrary to the usual habit of nursery trees. To satisfy himself of the cause, one of these trees was taken up, when he found not a single small root or spongiole present. The same tree was immediately planted in a shady position, watered and carefully nursed, and ultimately started off into active growth during the summer season.

If the defect should lie in the soil, draining or the admixture of disintegrating materials, as sand, lime, or even manure, might be suitable remedies. If the debility has resulted from defect in climate or from leaf-blight, then stimulants would be appropriate, such as mulching the roots in fall, shortening back the branches in spring, manuring and spading about the roots in spring, and careful summer cultivation. Leaf-blight is sometimes very difficult to arrest, the fungus attacking the leaf colonizes upon the

young branches also, and by that means often maintains its existence from season to season. In cases of this sort, perhaps the best treatment would be to syringe the affected trees with strong soapsuds, or with

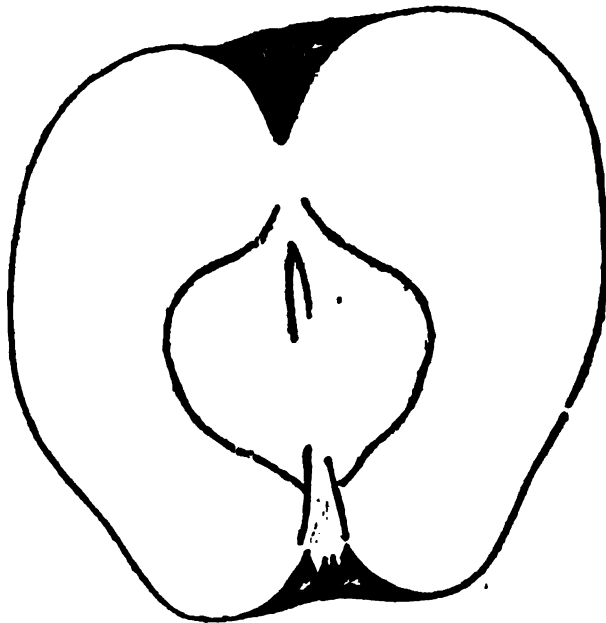
water to wet the surface of the small branches and cause lime to adhere, and afterward dust them with air-slaked lime until the branches are coated.—*H. P. Byram, in the Louisville Journal.*

#### WHITE WINTER PEARMAIN.

DR. WARDER:—The February Number of your journal (which is one of the best ever issued) is just received.

I notice in the transactions of the Ohio Pomological Society, that fine specimens of

the Michael Henry Pippin were shown by yourself, grown in Indiana, "where it is almost exclusively known under the name of White Winter Pearmain."



WHITE WINTER PEARMAIN.

I wish to elicit facts sufficient to settle the question, Is the apple cultivated in the West under the name of White Winter Pearmain, the same which is grown at the East under the name of Michael Henry Pippin?

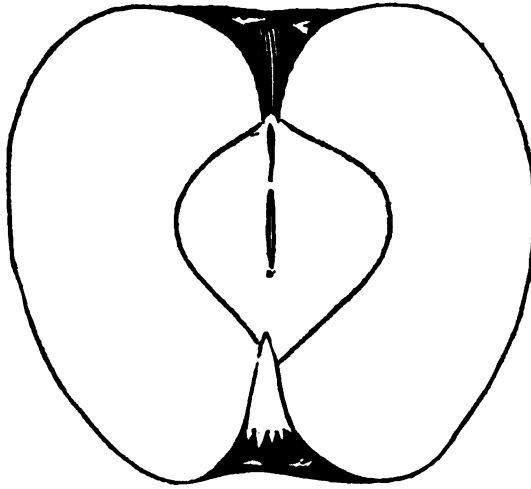
It is understood that at the session of the Congress, held at Cincinnati, a distinguished Eastern pomologist pronounced specimens

exhibited under the first name to be the true Michael Henry Pippin.

Since that time some pomologists and nurserymen have substituted the latter name for the former; while others, not deeming the evidence in the case conclusive, still retain the former name.

For the purpose of having the varieties speak for themselves, (if there were two,)





MICHAEL HENRY PIPPIN.

I sent to our discriminating pomological friend, J. J. Thomas, cions of our White Winter Pearmain.

In August of the first year, he says, "the White Winter Pearmain and Michael Henry Pippin are quite distinct in growth and leaf," "although the fruits are so similar." It may be that what Mr. Thomas has compared with our White Winter Pearmain is not the true Michael Henry Pippin of New York; if so, the *two* may yet be only *one*.

I would say, as regards the fruit of the varieties in question, that specimens of each may be selected, which would so nearly resemble each other in form and color, that even a *good* pomologist *might be mistaken*, and particularly at the time of the sitting of the before named Congress; both varieties being in a very immature state.

With the *trees* it is very different; whether in the nursery or orchard, they are easily distinguished one from the other.

Very few works on pomology describe the peculiar characteristics of growth of varieties, which is very important with many of them, though Mr. Thomas does

so in part, which makes the "Fruit Culturist" (at least in that particular) stand in advance of other similar works.

Though it would be difficult in a treatise on physiognomy to describe every individual so as to be known at sight, and equally so with respect to trees; still with a great majority of them, there are certain peculiarities by which one is readily distinguished from the other.

Will friend Thomas have the goodness to describe the exact manner of growth, leaf, etc., of the true Michael Henry Pippin?

ADNAH WILLIAMS.

GALESBURY, KNOX Co., Ill., Feb. 26.

The question as to these apples is one of considerable interest among our pomologists, although not of much importance unless it be true, that one variety is more thrifty, for the fruit is exceedingly similar. Cuts of both are given, but as the correspondent has stated, similar specimens might be selected of both names. Confusion certainly exists even among intelligent cultivators, who have both sorts. I shall be glad to hear from my friend Thomas, but we have already

verified our Michael Henry by his excellent description of that variety.—Ed.

#### Low Trees.

*Dr. J. A. Kennicott*:—In the March number (1851,) we were favored with an editorial on "*High or Low Trees*," which I consider to be one of the best and most needed ever found in the Farmer. I have seen little on the subject since, and as most of the articles on *fruit raising* are from practical nurserymen, I fear low trees, or trees with low heads, will find little encouragement. Some of them tell us a tree can be formed to suit the purchaser, after it is set in the orchard.

Thanks to the rabbits, I have some very productive trees that branch off six or eight inches from the ground, but I do not like to depend on that mode of forming a low tree. It puts it back somewhat, if we succeed in forming a good head, which is rather difficult with some varieties.

I am aware that more room is required for a large low head, in the nursery, packing-box, wagon, and wherever we put them; but I am certain that with me they have paid all extra cost, many times over.

I have Janets, Limber-twigs, Bellefleurs, Winesaps, Romanites, and some others, set the spring of 1839. Those with the lowest heads are invariably the most productive. The greatest difference is seen in the Janets and Limber-twigs. I thought the difference in produce would be less as the trees became older, but it was more apparent last season than any year before.

The value of cuttings (for grafts, etc.,) from the most popular varieties, has been a serious drawback upon the trees from some nurseries. That evil, however, time will cure, but unless nature can be made to understand that the trees are to be transplanted to the orchard after some two or three years, she will continue to adapt them to a city rather than a country life. Are not occasional isolated trees worth more for the orchard, after two years in the nursery, than those in a crowd after three or four years?

If we notice the crab, haw, plum, cherry, walnut, hickory, and most of our forest trees, that have made their growth while standing alone, we see that they differ materially from those in a crowd, in form, feature, stature,

strength, and most of all, in quantity and quality of fruit.

Trees of the same age, that have from three to eight principal branches, are generally much larger near the ground, than those with but one.

For fruit I prefer those trees that branch off one to three feet above the ground, or just high enough to have limbs out of the reach of the rabbits. The bodies must be protected. Where the limbs are within reach of the rabbits, I tie a piece of white muslin on the tree. I use split corn-stalks tied with willows to protect young trees, for I set some every spring, and have decided to set no more bean poles for fruit trees.

Respectfully, yours,

L. W. CURTIS.

CANTON, Fulton county, Ill.

To which the editor responds—

Good. We like this talk. True, every word of it, as we have proved more than once. Trees with low heads *do* bear sooner and better, and will bear longer than whip-stocks or bean poles. But they don't *sell* as well! In our prairies, low headed trees are the only ones that can hold up their heads, or hold on their fruit. They are the honest and naturally shaped FRUIT BEARERS, but they are miserably unpopular with that large class of purchasers, who know more about trees, than the men who raise them. Nurserymen must live, and we had better sell some switches, than have the wise ones plant no trees. But 'tis a pity that customers will not let us be honest, and will cheat themselves, in spite of our representations. Well, two straight trees without heads, cost the nurseryman less than one of the right shape. *This* fact may elicit thought, and cause inquiry. We hope it may.—*Prairie Farmer*.

#### Northern Fruits.

THE Nota Bene is undoubtedly the best of the plums originated by Mr. Corse—not much inferior to the Green Gage. It is quite extraordinary to see the enormous crops borne by the plum-trees in Lower Canada, and we presume it will be the same in the State of Maine, or nearly so. [It is so, now, H. L.] The Green Gage is the finest plum in Great Britain, but here it bears ten to one compared with that country.

We must say, however, that we have never tasted that fine sort so high flavored in Canada. But then we must bear in mind that here it is grown as a standard, while in Britain it is cultivated generally on walls, the effect of which, it is well known, is to give the fruit raised in such situations a very superior flavor. The writer of this letter (Mr. Brown) paid a visit to his native country last summer, and nothing struck him so much as the very great superiority of the fruit raised in America, a remark which may perhaps apply even to the grapes raised under glass; and this remark is quite in accordance with what has been so often stated by the lamented Mr. Downing, whose loss we can never sufficiently mourn. Taking into consideration our rich and fertile soil and glorious climate, there can be no doubt that the time is at hand—even if it has not already arrived—when this land will be distinguished as the greatest fruit producing country in the world.

With regard to your inquiry about a grape, early enough to ripen every year, in open culture, in the neighborhood of Montreal, we beg to say that we believe the Black Cluster to be the hardiest known grape. It is a great bearer, ripens every year, and can be depended on for a crop. It is much harder than the Isabella, which rarely or never ripens here, its too luxuriant shoots being apt to be killed by severe frosts. We have known the Isabella killed down by the cold, in the same situation as the Black Cluster, the latter being unaffected by the severity of the frost. The sort in question is also a nice eating little grape. The Wellington, another variety cultivated in open ground here, although bearing very large bunches, (which we have seen between three and four pounds weight,) is quite worthless, or nearly so, seldom ripening outside, and even when produced under glass, having an acid taste, and being deficient in the fine flavor so much prized in a good grape. The Black Hamburgh, that prince of grapes in a vinery, is now being relinquished for open culture, its crop being uncertain, and requiring too long a time to ripen. The Esperione is being tried, and we believe it will be found valuable. The White Sweet-water has been much grown here in the open air, but it is more apt to mildew than any other sort, and very often does

not ripen. It is, in Britain, where we have cultivated it, perhaps more liable to mildew than any other in a vinery—here, on the contrary, within doors it is one of the safest. We consider the White Sweet-water an unsafe sort for open air culture in this country, although it is a fine showy looking grape on a trellis.

You mention the *Beurre Crapaud* pear.\* We quite agree with what Mr. Corse stated to you, as to its hardness. We can not say indeed whether or not it would thrive as far north as the sugar maple, but this we know, that it has stood uninjured in these grounds, at a temperature of thirty-two degrees below zero. We hear of many tests to which fruit trees are put by our enterprising cultivators, but we think you will agree with us that we have put the pear to the coldest test it ever had. We have the pleasure to inclose a cion of this variety, (*Beurre Crapaud*.)

We read long ago, with very great interest, your valuable communication in the "Horticulturist," on "Select Fruits for the North." Yours is no doubt the best method by which the information generally wanted will be best acquired. We have tried the quince-tree here as a standard, and, so far as our experience has gone, we would pronounce it totally unfit for cultivation in Lower Canada. The peach and the apricot are cultivated with us only on walls matted up in winter. It appears to us, however, that these valuable fruits are very nearly hardy, and that a variety may yet be found suitable for our climate, as an open standard.

We have had, as yet, an easy winter—thermometer not more than twenty degrees below zero, with about the average quantity of snow—but are anxious, like all good cultivators, for the return of spring. In conclusion, allow us to add that we will at all times be most happy to communicate any information in our power, and hope to have the pleasure of hearing from you on any of the knotty points of fruit and fruit trees. By the by, what is your estimate of the eating qualities of the *Pomme Grise*, the farmer's winter apple of Lower Canada?

We are, sir, yours very truly,

COCKBURN & BROWN.

CORSE DES NEIGES NURSERY,  
Montreal, Canada, Feb. 19, 1883.

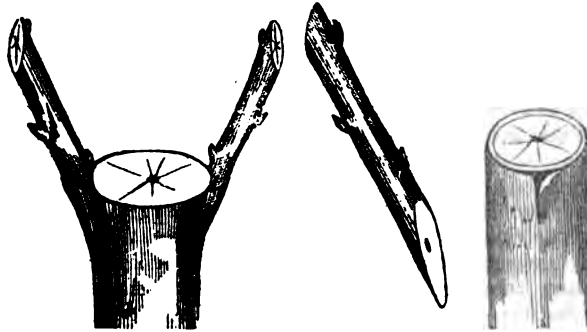
\* See Downing's Fruits, page 365.

## BARK GRAFTING.

As the season is now approaching in which fruit tree and other grafting is generally practiced, I would suggest for the benefit of persons engaged in that operation, a plan which I have successfully adopted for the last two seasons. And, without supposing it new, (although it is not the one usually recommended in the books,) I will describe it and its advantages over the common

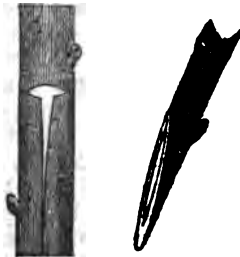
cleft-grafting. I have no doubt that it is described among M. Thomas' fifty methods, but never having seen those, and supposing the majority of grafters in the like predicament, I am induced to give it publicity.

This system, however, only applies to trees or limbs of half an inch or more in diameter. For smaller stocks and roots, whip, splice, and cleft-grafting are preferable.—



In consequence of the numerous mistakes of nurserymen, from whom I have purchased trees, after fruiting a large portion of my apples and pears, I have been induced to re-graft many, which I did in the usual way, (by cleft-grafting,) and having regularly lost about 88 per cent. by the wind blowing them out, after making a fine, vigorous growth of more than two feet, I came to the conclusion that I must adopt some other method, which I have tried for the last two seasons without having a single one blown out. I saw off the limb, or stock, square across and pare it smooth, the same as for cleft-grafting, without splitting the stock, but merely the bark one-half or three-fourths of an inch down, on one or more sides according to the number of grafts which I wish to insert, and after preparing the cion, or graft, taking as usual three buds, though when they have been scarce I have used on-

ly two, and in several instances but one, successfully. Cut the graft diagonally across with a slope of about an inch long, then with the point of the knife open the bark at the top of the slit sufficiently to introduce the cut point of the graft, push it gently down until no more of the cut portion is visible, tie up, or wax in the usual way, and the operation is finished.



At the end of the season of growth, you will find that your graft has grown firmly to the side, being almost as strong as any other

lateral shoot, and if you put two or three in, by the end of the second or third season the whole top of the stock, if not too large, will be covered by the callus and look perfectly natural; whereas cleft-grafting, owing to the split in the stock, never fills up—moisture gets in, which producing disease, ultimately causes the tree, frequently where it has attained full growth, to split and break down.

I have lost no less than four out of a row of 10 fine 12 year old Bellefleur apple-trees, this last season, which were grafted five feet from the ground in the old way. As a covering for the graft, I always use cheap muslin dipped in hot grafting-wax, cut into strips from one-half to one inch wide—it saves tying and time, and is much neater.

A cion can be inserted on the side of any limb by opening the bark in the same way as for budding, or a graft neatly fitted into a gimlet-hole on any part of a stock or limb will answer equally well—in fact, it is a beautiful method when you wish to fill up with a limb any naked space, for the sake of symmetry.

T. V. PETICOLAS.

March 10, 1853.

#### A Balance Line—Cherries.

DR. WARDER:—In the March Number of the Western Horticultural Review you give a select list of fruits, said to have been suggested by Mr. Wilder, as adapted for cultivation in the vicinity of Boston. Your note appended conveys no very high compliment to the selection of apples. Permit me, Mr. Editor, to enter my protest against that of the cherries, at least so far as its adaptation to northern Ohio is concerned.

The list we will take up in detail.

For three sorts, he recommends—1. Mayduke; 2. Black Tartarian; 3. Downer's Late.

1. The May Duke, with me, has never produced a good crop in the most favored lo-

cality; besides the trees are unhealthy and short-lived. The Doctor ripens several days earlier, is a finer flavored fruit, hardy, and exceedingly productive every season.

2. Black Tartarian is large, handsome, and popular; yet a little deficient in flavor; besides it does not bear a tolerable crop oftener than one year out of three. The Black Hawk is very slightly inferior to it in size, but greatly exceeds it in beauty, flavor and productiveness. Its firm consistence and glossy black color fit it above all others for a market fruit.

3. Downer's Late is a valuable late cherry, but will not in any point of view compare with the Late Bigarreau, which is equally tardy in its period of ripening, and rarely fails to produce a full crop.

For six sorts, he adds—1. Belle d'Orleans; 2. Black Eagle; 3. White Bigarreau.

1. The Belle d'Orleans is known here only by reputation. Taking the last authorities as guides, it will by no means equal the Cleveland or Rockport, both of which are large, handsome, delicious and prolific varieties.

2. The Black Eagle has never, to my knowledge, produced a tolerable crop in this vicinity. The Pontiac resembles it in many of its features, but is an abundant bearer.

3. The White Bigarreau is an old and unhealthy variety, which I have known for more than thirty years, and have never yet seen a fair crop of fruit upon it. Against it will be placed the Governor Wood, a cherry which is large, beautiful, hardy, productive and delicious; none is more exquisitely rich and delicate; it is staked against any variety the world can produce.

For twelve sorts, he adds—1. Elton; 2. Downton; 3. Late Duke; 4. Knight's

Early Black; 5. Sweet Montmorency; 6. Sparhawk's Honey.

1. The Elton is a first-rate cherry, rarely producing heavy crops. Kirtland's Mary is its equal in every respect, and greatly its superior in beauty, fine flavor and bearing qualities.

2. The Downton will not compare favorably with the Osceola.

3. The Late Duke is no better than the May Duke. It matures irregularly some days later. The Red-Jacket ripens about the same period, and is vastly preferable.

4. Knight's Early Black is fully rivaled by the Tecumseh.

5. The Sweet Montmorency is not as fine a fruit as the Delicate.

6. The Sparhawk's Honey will fall far below the Jockosot, on a comparison.

Ohio Beauty, Elliott's Favorite, Brant, Keokuk, Shannon, and Kirtland's Morello, will each more than match the morellos in Mr. Wilder's select list.

Such at least is the result of a thorough trial, in their native locality, with all the new seedlings above named. How well they will sustain themselves in other soils and climates remains to be tested. It is proper to add, that these comparisons have been made with other varieties placed under equally favorable circumstances.

By striking a balance line between these two lists, a heavy credit is found in favor of the Ohio seedlings—at least so far as Western cultivation is concerned.

Mr. Wilder is so conversant with fruits, and so well posted up in all matters appertaining to the advancement of horticulture, that it can not be supposed he is unacquainted with the relative merits of the two lists. It must therefore be concluded that some peculiarities of soil and climate about Boston have rendered those old varieties preferable.

Another query is not so readily solved: It is nearly six years since many of these seedlings were introduced to notice, through the medium of the Horticulturist, by Mr. Elliott, whose qualifications and responsibilities in such matters are not to be doubted. The original trees, while loaded with fruits, have been visited perhaps more than once, by Messrs. Barry, Bateham, and yourself, each of whom has given strong testimony in favor of the excellent qualities of these seedlings, through the columns of your respective journals. The fruits have been exhibited for a series of years on the tables of the Cleveland Horticultural Society, and occasionally on those of the Columbus Society; yet the editor of the Horticultural Magazine at Boston, has carefully avoided the noticing of them in any manner. This is a little remarkable, as he claims his journal to be a perfect history of the progress of horticulture in the United States, and has recorded the debut of almost every seedling fruit besides, both in Europe and this country.—That Horticultural Congress which refused to have any of them placed among its list of fruits worthy of further trial, is not likely to lose its reputation for caution and prudence.

CLEVELAND.

NORTHERN OHIO, March 8, 1853.

This article, containing important information respecting a valuable department of fruit, is inserted in the hope and with the object of diffusing information that will be valuable to guide Western planters in their selections. It is hoped our Boston friends will not feel hurt by allusions to their having overlooked our Western seedlings, which have very naturally and deservedly attracted much attention here.—Ed.

BUCKWHEAT may sometimes, perhaps, be admitted into a young orchard, though not in a bearing one.—*Prairie Farmer*.

## THE APPLE-WORM.

( *Carpocapsa Pomonana* . )

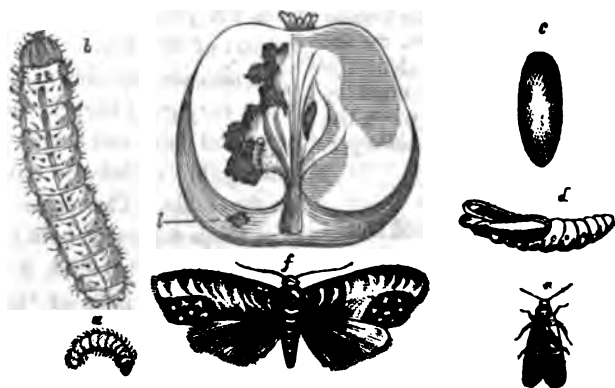
IGNORANCE OF INSECTS.—Truly we are all sufficiently ignorant of the habits and characters of those little pests and friends of man—injurious, but in many cases also useful, they demand our attention and study. Thanks to Kollar and our Harris, and a few others, we may learn much of them if we will.

In the enlightened condition of our brethren in the Peninsula State, it was hardly to be expected, however, that the editor of the Michigan Farmer should have questioned their identity, or confounded the apple-worm, *Fortrix* (or *Carpocapsa*) *pomonana*, a moth, with the curculio, a beetle. The following description of the former is from Kollar's work.

THE fore-wings of this small moth have a light gray ground, on which are scattered so many delicate streaks of a dark hue, intermixed with others that are broad and cup-shaped, as to give the whole some resemblance to damask. On the posterior border of the fore-wings is a large reddish

brown spot, which is surrounded by a golden mark in the form of a horse-shoe. The hind-wings are of a sparkling brownish red inclining to yellow, and are surrounded on the outer border by a broad light fringe. The thorax and abdomen are of yellow-and-brownish gray.

This moth is to be seen in the evening, usually in the beginning of May, on the apple and pear trees, busily engaged depositing its eggs, either on the calx, or in the hollow part of the fruit at the stalk end. It appears to prefer apples to pears, at least more grubs are found in the former than the latter, when both sorts of fruit are plentiful. It invariably selects the firmer sorts of this fruit, knowing instinctively that they will be the most palatable to its future progeny. In favorable weather the little grubs are hatched in a few days, so that in May, apples and pears are found infested by them. At first the grub is white, with a black head and collar, and black slanting double dots, which run in four rows from the head to the abdomen. It afterward becomes more of a flesh color, the head and collar turning brown, the dots gray and indistinct. It is fully grown in three or four,



THE APPLE-WORM.—Larva, natural size, *a*; greatly magnified, *b*; larva inclosed in a silk web, *c*; chrysalis, *d*; perfect insect, *e*; magnified, *f*; larva in a young apple, *g*; larva, *k*; quits the fruit at *l*.

weeks, as its food never fails. It now leaves the fruit, whether it be still hanging on the tree, or has fallen off, and selects for itself a

secure place on the stem of the tree to spin its cocoon and become a pupa. It usually chooses the rents and seams of the loose

bark, hollows itself out a chamber and spins a white web over itself, intermixing some of the loose bark with it.

The little grub becomes a pupa immediately in the web, and in a few days the moth comes out, which shortly afterward pairs and deposits eggs on the fruit. In this way in July and August, and partly in September, much sound fruit will again be pierced and infected with the caterpillar of this moth, which is then numerous in proportion to the number of eggs of the first generation, which were laid and hatched in May. In the year 1822, which was warm and dry, more than the half, particularly of the choice fruit, was grub-eaten, and moths were still seen laying their eggs at the end of September. Fortunately those caterpillars which are so late in leaving the egg, seldom arrive at maturity, as the fruit is taken off the tree before that time.

To diminish this insect in some degree, we must, during the summer months and even later, collect the fallen apples every day, and take them out of the garden; for we shall find caterpillars or little grubs in a great many of them. Let the person who has only dwarf trees in his garden, frequently look over the fruit on them, particularly in May and the beginning of June, and remove those having grubs in them, as they would inevitably fall off before they were ripe, particularly if they are late sorts. As this caterpillar usually forms its cocoon under the loose bark of fruit-trees, we are more imperatively called upon to clear the trees of their loose bark, which must be done before the middle of April, when the moths have not yet appeared.—*Schmidberger.*

#### Apples on a Dead Tree.

THE following letter was presented to the Cincinnati Horticultural Society, by Dr. Whipple, February 5th, when he also exhibited the specimens referred to. Strange to say, the Rawle's Janet were large, fair, and of most beautiful coloring, as 'pretty specimens as ever graced a horticultural table. The Day apple very much resembled the Janet, except in flavor, and considering its never-failing quality, may be a desirable variety. The Janet has always been

considered a hardy variety, and although in this case it seemed to have suffered from the severity of the season, renewed testimony is here offered as to its valuable character of late blooming, which makes it so good a bearer.

"The general failure of the crop of apples in the West, the last two years, has made it very desirable with fruit growers to know what varieties will best withstand the frost in this climate.

"In my orchard, composed of three hundred bearing trees, embracing nearly all the best apples usually cultivated in the West, but two varieties out of over forty have borne average crops in both 1851 and 1852: these are Rawle's Janet, and another known here as the Day apple.

"I send specimens of the Janet, part of which are of the usual size and appearance; the others, as you will perceive, of unusual size and color—the latter grew on a tree killed by the frost last winter, the bark of which became loose for fifteen inches above the ground and fell off by midsummer, while the apples still continued to grow, and were not picked from the tree until the latter part of October.

"I also send specimens of the Day apple. It is a very good keeper, the fruit generally large and fair, and a very good apple for cooking, but of inferior flavor and too acid for the table. The trees in my orchard have borne full crops both last year and the year before, and I think it is quite as well entitled to the name of 'never-fail' as the Janet.

"In 1851 I had a fair average crop of White Bellefleur, Esopus Spitzenberg, and Golden Russet, but none of these varieties in 1852.

"In 1852 I had a fair average crop of the Rambo and White Winter Pearmain, but none of these in 1851.



"Supposing that the statements I have made may afford some information upon the subject referred to, I wish you would communicate them in some way to the Cincinnati Horticultural Society.

"Very truly, yours, J. A. MATSON.

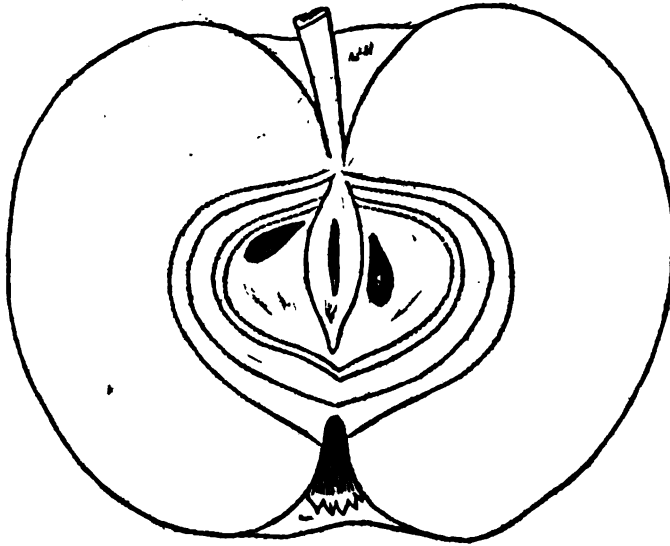
"SPRING VALLEY FARM, near Greencastle, Ind."

#### Cracking and Western Spy Apples.

THESE fruits with some other varieties were received last autumn, from my kind friend, Samuel Wood, of Smithfield, Ohio.

They were then not in a condition to be fairly tested, but outlines were carefully drawn and brief memoranda of their quality taken, hoping that a renewed opportunity would offer for their examination at the January meeting of the Ohio Pomological Society, at which it was expected this excellent nurseryman would have been present. The following information is gladly laid before the public.

He says: I have recently called on Henry Barger, of Harrison county, with whom the

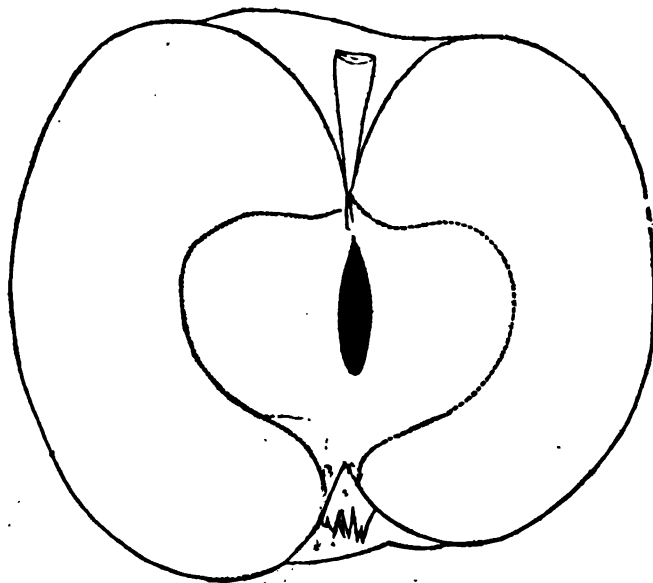


CRACKING APPLE.

Cracking apple originated, for the purpose of obtaining its history which is rather a singular one. He informed me that almost thirty-five years ago he procured of Jacob Neasley, a noted nurseryman, one bushel of apples (all of the same kind) grown on a grafted tree; the apples were very good. He did not get the name of them, but from the description he gave me I judge they were the Gate, as Neasley had that variety and valued it highly. From seed of those apples he raised twenty trees, but not one brought fruit like the original, and no two

trees produced similar varieties. One of these specimens was the Cracking apple, which is not easily surpassed in good qualities. It grows large and smooth, and is of an agreeable flavor; we think it scarcely second to any in its season. It ripens in the tenth month, October, and keeps till the first of January. The trees are good strong growers and require but little pruning.

*Western Spy.*—The original tree was a seedling planted in this neighborhood by John Mansfield, about forty years ago. It is a remarkably good bearer, not failing



WISTEN ART.

when all others are killed by frost; it is a moderate grower and throws out numerous branches along the body when in the nursery, but after being transplanted in the orchard it forms a good spreading top, making a handsome tree. The fruit ripens in the tenth month, and keeps till mid-winter; it is a fine large cooking apple, but not first-rate in flavor, though some admire it.

SMITHFIELD, Ohio.

#### Egeria.

DR. WARDER:—As it is the object of your valuable Review to communicate to your readers any hint that may be useful as a remedy against evil, as well as that which may be of service to promote the growth of fruit and fruit trees, I send you the following simple recipe for preventing the depredations of the peach-worm.

In the last ten or fifteen years, much has been said and done on this subject, and after all nothing has been gained. I have experimented for two or three years with great

success, by the application of coffee grounds to my trees.

My method is, to take away a little of the top soil from around the body of the tree, putting the coffee grounds in its place, in the proportion of a quart to a large tree, and a pint to a small one. This I do twice in the year—the first week in June and the first in September. I will venture to say, that if properly attended to, this will prove a sure preventive against the ravages of this relentless destroyer.

Now, there is scarcely one family in this country but could save enough of this article, in one year, to apply to fifty trees; and there is as much thrown away in the city of Cincinnati as would supply all Hamilton county. Yours, respectfully,

A FRUIT GROWER.

Accounts from California state that many thousands of acres of wheat have been sown in that state the present year.



## The Garden.

### THINGS SEEN IN ARKANSAS.

HAVING been absent during the month of February on a southern tour, in pursuit of health and business, I may have been supposed to have forgotten my horticultural friends, the readers of the *Review*, and their interests. Such however has not been the case; the material for the March Number had been placed in the hands of the printer, and owing to the attentions of a kind friend it was able to make its appearance promptly, as though introduced to the world by its legitimate sponsor. Some correspondence, it is true, which arrived after my departure, was necessarily deferred, and will now appear rather out of season. By the absentee, however, you were not forgotten; on the contrary, with watchful eye, he was constantly seeking for something that would interest you. But alas! the young state of Arkansas possesses little in the way of horticultural development, but is chiefly interesting on account of her natural position, climate, and productions.

Entering the state from the great Father of Waters, and pursuing his tributary which traverses and gives name to the state, the observer finds himself in the midst of an extended plain but little elevated above the water and liable to frequent inundations.—The stream is rapid, and in its devious course is constantly cutting into the alluvial soil in such a way as to show its fluvial origin. The banks, averaging twenty feet

in height, are composed almost entirely of sand alternating with alluvial soil, curiously stratified, and giving unquestionable evidence of the successive overflows of this sand bearing river.

Back from the stream, depressions in the surface are of frequent occurrence; these are either deep, with bold banks and filled with water constituting the lakes, or more shallow they are the cypress swamps of this region. The river banks frequently expose ancient cypress swamps that have existed at a lower elevation, long since buried by an afflux of sand, showing that the river has repeatedly changed its course in its devious wanderings through this wide-spread plain; indeed, so apparent is this, that the river-men constantly assure the observant traveler, that "the whole country has been made." Another curious feature of the banks, is the distinct stratification which is everywhere exhibited, not unfrequently presenting a low water mark of stiff, dark loam, which still contains the remains of majestic cypress-trees buried in sand, and occupying an upright position; above this a sandy loam of several feet in thickness, which has the appearance of having been once a fertile surface soil; superimposed upon this are many alternating layers of virgin sand, each of which is covered with a layer of dark soil, showing that they have been separately exposed to the action of the atmosphere and

to the decay of vegetation. Shooting up through all these successive formations, with his towering head extending to the summit of the forest, still stands the ancient cypress, which has escaped the ravages of time that had destroyed so many of his original companions at a lower level. Surely this is a rich field, in which a disciple of Lyell may find abundant evidence of the sufficiency of present causes to account for the various transmutations of the surface of the earth; nor need he trace back the life of a cypress tree, for within the recent history of this state many of these changes have been witnessed. Farms that were yielding abundant crops were overwhelmed with heavy deposits of sand in 1833; that was again entirely swept away from some fields by the flood of 1844, which enabled the farmer to resume his labors upon the fertile soil beneath. The constant falling in of these sandy river banks afford frequent opportunity for observing the stratification wherein is written, in distinct characters, the history of the stream.

There will also be found a frequent succession of cut-offs, where the river has shortened its course many miles, while the old bed of the stream is rapidly filling up with sand, and sustaining a thrifty growth of young cottonwood; while the absence of old trees is the only evidence that the stream had ever pursued its course in that direction. In some positions, the banks of the river are so elevated as to be entirely beyond the reach of the ordinary annual inundations. Here we find extended plantations on an exceedingly fertile soil, furnishing large crops of the great staple, cotton, which enable the proprietors to erect handsome dwellings for themselves, surrounded with comforts and adornments, and also to provide neat and substantial outhouses for their numerous servants, who in such cases, have

the credit of being the best practical horticulturists in the country.

In the neighborhood of Pine Bluff a new feature presents itself, although the peculiar alluvial characters of the stream, as already described, continue to mark it throughout, except where interrupted by the older formations, as at this point, where low ridges of an old tertiary[?] deposit cross the stream, and make up a considerable portion of country from here to the Wachita Hills. This formation consists chiefly of alternating layers of colored clays and sand, capped by a very thin soil bearing pines and oaks, and resembles in many respects the Chickasaw Bluffs on the Mississippi.

The next feature of geological interest is the formation of slate and sand rock at the capital of the state, where the horticulturist will find something of more interest, in the

#### Gardens at Little Rock.

After a tedious trip up the Arkansas river, through the wilderness of low alluvial lands, wending our way among thickly set snags, or fenced in by broad sandbars and thick forests of tall cottonwood, it is pleasant, when landing at this point, to set your feet on *terra firma*, and witness the taste manifested in the gardens and cultivated grounds on this more elevated plateau. Even in the winter they are enlivened with evergreens, some of which are not sufficiently hardy to endure the rigors of a more northern climate. The *Magnolia grandiflora* looks well here; the wild olive, *Lauri mundi*, is beautifully fresh and green; so are the different Pines, Cedars, *Euonymus* and Box; the Bodark or *Maclura*, the *Bignonia catalpa*, the *Robinia pseudo-cassia*, and the *Pride of China*, are equally thrifty as street trees; and the Fig endures the winter, and bears abundantly its luscious fruit. The Weeping Willow waves gracefully above the rich green

of the Holly; the China Roses retain their leaves after blooming most of the season, and are now pushing out vigorous shoots of new wood for the spring blossoming. The pear and the apple appear to grow with vigor, and are said to fruit well; while the peach bears a venerable appearance, and is free from the attacks of the Egeria.

The garden of Mrs. Ashley, upon the main street, contains many fine specimens, among which are the evergreens already mentioned, and others of equal beauty.—Fine plants of the *Yucca gloriosa* and *Yucca filamentosa* adorn this garden with their magnificent parade of white bell-shaped flowers in their appropriate season; while now, in February, the *Cydonia japonica* displays its scarlet flowers upon leafless branches. Great expense has evidently been incurred upon these grounds, which, with their appurtenances, constitute a complete homestead in the midst of the city, and occupy a large space.

Opposite, is the residence of the oldest editor in the state, Mr. Woodruff, who established the first newspaper, then at Post Arkansas, which was an old French fort of the sixteenth century. Mr. Woodruff now edits the Democrat, and enjoys the garden attached to his residence, where are several fine specimens of southern growth that appear to take excellent care of themselves. Among them is a simple but attractive object—a *Bignonia radicans*, attached to a cedar post twenty feet high, branches and droops in every direction like a weeping tree.

Further up the main street, on the western side of the city, is the beautiful State-House, which presents finely to the river, as well as to the street running south of the public square. It is a collection of buildings in the Grecian style of architecture, and does credit to this youthful state, rich in

natural resources that the legislature should not be slack to develop by a thorough geological survey, the report of which will be read with avidity throughout the country, and thus do an immense service to the state, by indicating to the enterprising everywhere, numberless opportunities for excellent investments of capital and labor. Nor need the governor look far for a man well qualified by activity and knowledge to conduct the survey which will conduce to the agricultural as well as mineral developments of the state. Dr. G. Shumard, of Fort Smith, is already familiar with the country, and a devoted student of geological lore—both that obtained from books, and that written upon the rocks themselves.

Opposite the public buildings is the residence of Roswell Bebee, Esq., a prominent citizen, who has endeavored to encourage the internal improvement of the state. His enterprise deserves acknowledgment. May the projects for the benefit of the state, in which he is engaged, meet the attention they deserve. His quiet but elegant residence is surrounded by beautiful trees and shrubs, among which are many of the natives—the Holly, Bodark, etc.

I should have stated that the city is situated upon a high cliff of slate formation, overlaid by a deposit of drift, consisting of clays, sand and gravel, which presents a gently uneven surface that adds charms to the surface of an interior city. The depressions furnish admirable drainage, and the elevations are beautiful sites for residences, many of which are neatly improved.

My friend R. Wait is becoming fired with horticultural zeal in the arrangement of his new garden in the south-west part of the city, which he is stocking extensively with grapes and other fruits obtained from the nurseries of Cincinnati. To the south, on an elevated position, is the ancient residence of the John:

son family, neat and well kept; near which is quite a little orchard of healthy looking apple-trees. To the south-west may be found the quiet and dignified residence of Colonel Fowler, surrounded by fine trees, and near it one of the most gardenesque establishments of the city, belonging to Captain Pike, well known as a poet and prose writer.

At almost every turn some neat cottage presents itself, surrounded by trees and vines, and at this season enlivened with the snowy and roseate blossoms of the plum and peach. Just beyond the city limits, the substantial inclosures, excellent buildings, and benignant shade trees, (wisely preserved and encouraged in this latitude,) indicate the site of the United States Arsenal, and constitute an interesting feature, where everything is in complete order.

Pursuing the stream beyond the capital, the scenery presents an altered appearance; and as we here enter the hilly or mountainous parts of the state, it may be divided into the upper and lower river. It is true that the cottonwood, cypress, sweet gum, and cane-brake, characteristic of the alluvium, still continue along the banks; but a more hilly country makes its appearance, bearing a larger proportion of oaks and pines, and presenting, when cut by the river, fine bold cliffs of sandstone, and when seen in the horizon forming beautiful peaks and a real mountain outline. Here also we find a poor, thin soil, characteristic of the rock upon which it is based—the Ozark mountains being a coal formation, with a large proportion of sandstone. Here, too, is an explanation of the sandy soil below, found in the immense amount of excavation which has occurred in these hills. Leaving in bold relief the cone of the *Mammelle*, towering like a volcanic peak—the extended escarpment of the *Petit Jean*, the massive *Magasine*—

at Van Buren, near the western boundary of the state, at the base of a range of hills, a pleasant village is found, with indications of considerable mercantile activity. As an evidence of the prosperous state of this town, snug inclosures, neat gardens and comfortable residences may be cited. Here, too, is a real nursery in the hands of Rev. W. K. Marshall, who conducts its cultivation as the means of diffusing good, and a taste for good things, rather than as a source of profit. This gentleman assured me that everything grew with remarkable facility, and that the seedling peach had not unfrequently presented flower buds at the end of the first year's growth from the stone, and that the trees bore a considerable crop in their third summer. It may be here stated that the soil and climate of Arkansas are particularly adapted to the peach, which does not appear to be subject to any disease nor to the depredations of insects. In hundreds which I personally examined there was scarcely a trace of the *Egeria*, which is troublesome in our latitude.

Leaving this point, the river cuts abruptly through the range of hills which shelter the town, and after the traveler has watched the last beautiful cliff, he turns and enjoys the prospect before him. A few miles up the river, he sees the thriving village of Fort Smith, finely situated upon a high bank at the mouth of the Poteau. This town has the advantage of the public buildings of the government. The fort was erected when this was the frontier of civilization, and the substantial buildings over which the stars and stripes ever float, give a bright and cheerful air to the town. The background of this view is peculiarly beautiful, being a grand mountain outline, from the midst of which, at the distance of forty miles, rises the tall cone of the Poteau, like some vast volcanic peak projected against the sky.—

The town of Fort Smith possesses many attractions in its regular streets and cheerful gardens, and intelligent people.

Here is formed the nucleus of a society, and the discussions of the Sebastian County Agricultural Society are duly reported in the Fort Smith Herald; the moving spirit of all this is Charles A. Hinckley, Esq. I here found in the garden of Mr. Henne the genuine Catawba grape-vine, which he is raising with some success, in anticipation of vineyard culture.

This is, indeed, the native region of the grape, which grows in greatest profusion on every hill, prairie and clearing. Among these native varieties which may vary in different parts of the state, there are doubtless some which possess merit. But Mr. Henne informed me that he had no faith in any except the Catawba. My own opinion is different, and I feel confident that some of the natives will be worthy of cultivation. Small vineyards have been planted in Washington county, to the north of this point; but of their success I was not informed. The soil in that region, and extending westward through the territory occupied by the Choctaws and Cherokees, is based upon the *crinoid* limestone rock.

*Fruit Culture.*—In all my explorations through this new state, I have been more and more satisfied that certain varieties of fruit, at least, may be cultivated with advantage and profit. As already mentioned, the Grape promises well. The Peach thrives in perfection, and though it blooms so early as February, it is not often injured by late frost. The Apple grows with peculiar vigor. I have never seen young trees more beautifully thrifty; but whether it will be able to withstand the long continued droughts that sometimes occur in this latitude, remains to be proved. Early summer varieties will undoubtedly succeed. To enable the late-

keeping winter sorts to mature their crops and preserve their leaves, it is probable that some care will be required in the way of mulching and cultivation. In all cases, however, I would recommend my friends in Arkansas who may desire to grow their own fruits of this species, from whatever source they may procure the trees, to select such varieties as have had a southern origin.—We have many such that claim a paternity in Kentucky, Virginia, and Tennessee, which are well worthy of notice. The Report of the Fruit Committee at the last State Fair of Georgia, introduces many to notice which may be valuable, and it is to be hoped that the Reports presented to the American Pomological Society, at its meeting in Boston in 1854, will make us familiarly acquainted with the best fruits of Georgia, Tennessee, and Arkansas. The Pear, where it has been tried in different parts of this state, appears to thrive well, especially on free stocks, and though not abundant, may be found in various situations, forming beautiful pyramidal trees and bearing abundant crops. This is especially the case where the early French settlers have located themselves on the banks of the river, as in the neighborhood of New Gascony, and Post Arkansas. The Quince grows here with great luxuriance; and the native Pecan furnishes an abundance of the sweetest of all nuts, more than supplying the place of the chestnut, which is only represented by the chinquapin.

*Insects.*—At this early season, little could be observed respecting the injurious attacks of these depredators. The absence or paucity of the *Egeria* has already been noted. No evidence of the Apple-tree Borer was observed; but on the first of March a veritable Curculio alighted upon an open note-book in my hand—the *little Turk* was of course instantly secured.

#### Plants suitable for edging Borders.

It is perhaps necessary to remind the reader, before saying anything on this subject, that the observations were made near St. Louis, and intended for the neighborhood of that city, and those parts of the Mississippi valley which have a similar climate. I am well aware that other sections of this extensive country, enjoying the benefit of a more favorable climate, have a much better choice of perennial plants and shrubs adapted to this purpose; but most species of plants employed either in Europe or in the Atlantic States of this Union, can not be used for the purpose of edging borders here, on account of the tropical heat of our summers, and the incessant freezing and thawing of our winters. Some of the plants used for this purpose in Europe are tender green-house plants here; for instance, *Bellis perennis*, *Primula auricula*, or *Statice armeria* and others, can not be grown here in the open garden. Dwarf Box has been tried in many places, but always without success, and so with many other plants.

The plants we commonly see employed here for the purpose of edging are the common pink, and sod of blue grass often mixed with white clover. The first of those plants in order to make a pretty edging requires transplanting every spring; the other constantly endeavors to run into the beds, and therefore requires frequent cutting with the spade, and in dry places is often entirely killed by severe drought of the summer or fall.

It is now more than fourteen years since I commenced making experiments with different plants to find out which of them might be suitable for edging in this climate, and I found that there is a sufficient number well adapted for it and resisting all atmospheric changes well. It is obvious that the size and habit of the plant must correspond

with the size of the border, the width of the walk, and must also be adapted to the soil and exposure of the garden.

Do you want plants for edging the borders along your carriage road in an elevated, dry locality, select the larger species of *Iris* or *Flags*, *Iris germanica*, in its different colors, *I. florentina*, *moniere*, *plicata*, *squalens*, *sambucina* and many others will answer; in moist or even wet grounds, *Iris pseudo-acorus*, or *graminea* will do, but the most noble, beautiful evergreen edging of large size is formed by planting the *Yucca filamentosa*,\* which succeeds well in the driest as well as in moist localities, and which will last for many years without requiring any other attention whatever, except to keep it clean from weeds. In the winter season it adorns the grounds by the beautiful green of its firm, erect leaves, and in the summer it contrasts well with other plants on account of the tropical appearance of its inflorescence.

For smaller borders in such dry and exposed situations as will hardly allow any other plant to succeed, use *Iris pumila* in its different varieties, which will make a solid, handsome and durable edging; in shaded, moister localities with good garden soil, *Primula veris*, (*Primrose*, *Polyanthus*,) in the more robust sorts, makes a very pretty edging, which may stand for five or six years without transplanting. For quite small gardens, for the front of houses in somewhat shaded situations, where the walks are generally paved or gravelled and the soil of the flower-beds is retained either by brick or wood work, we may hide the lifeless appearance of such an edging, by lining the inner side of it with a row of *Viola pedata*. This plant makes the most beautiful small edging which can be seen. The glossy, green, dissected leaves form during the whole summer a dense mass

\*Commonly called Adam's Needle.



of dark green foliage, covered from May till October with a succession of beautiful pansy-like flowers. I once had it five years old and only four to five inches wide. This plant varies very much in the natural state, in the form as well as color of its flowers, and there can be no doubt that by raising seedlings from it we might procure varieties as fine as those from *Viola tricolor* or *altaica*, with the great advantage of being a perennial well adapted to resist our summers, which the other exotic pansies do not.

But what we need most is an evergreen, shrubby edging, a substitute for the Dwarf Box, which does not succeed here; such a plant I found in the American Savin, a native of the mountainous parts of the eastern states. More than ten years ago I commenced planting edgings of it in different soils, and I have now over five hundred feet of it. So far as my experience goes it makes as fine an edging as Box, of a less stiff appearance, a more vivid green, especially in winter, stands shearing well, and is in no way troublesome or tender; it requires no other treatment than the Box does where it is at home, and needs no protection whatever.

Some amateurs may perhaps wish to know how to procure or propagate one or the other of the above named plants, and therefore some hints may be appropriate and acceptable. All the kinds of *Iris* are cultivated in nurseries, where they may be bought at a low rate; also the *Primula veris* or *Polyanthus*, which may also be raised from seeds sown in boxes and treated like green-house plants until they are one year old.

*Yucca filamentosa* can also be procured in nurseries, but perhaps not in sufficiently large numbers; whoever has old established plants may propagate it fast enough in the following manner. Take up the plant carefully, early in the spring, with as many roots as possible, then shake off all the adhering

soil, when you will perceive, mixed with the fibrous roots, a great many tubers of the size of a medium Irish potato; those are all to be cut off and planted eight or twelve inches apart in rows, the cut part down, and so deep as to have about two inches of soil above them which must be well pressed to the roots. In this way every tuber makes one plant, and the same process may be repeated every other year.

*Viola pedata* is a native of Missouri and many other states, where it grows in open woods and rocky declivities, whence it may be collected easily when in flower in May, or it may be raised from seed. All those plants as well as the Savin could be raised easily in nurseries and sold at low prices if there was any prospect of selling quantities of them, and my object is to draw the attention of gardeners toward this subject.

NS. RIEHL.

St. Louis county, Missouri, February 21, 1853.

#### Spring Duties.

DR. WARDER:—Although the earth is bound with frost, and the fields covered with snow, yet as this month advances, a spontaneous feeling of delight springs up, that Spring, joyous Spring, is approaching, and will soon be here with her birds, buds, and flowers, green fields and leafy forests; and the query follows, are we ready? are all our implements of husbandry bright and in order? For as the population of our country, and the consumption of the products of our soil increase, our energies should be awakened, that our crops, our farms, our gardens, our homes, indeed our everything, should keep pace with the great onward march. To accomplish this, we are persuaded that our minds should not wholly lie dormant, while the earth is bound and nature rests, but be kept alive by the pursuit of some of our valuable agricultural and

horticultural journals, now published from Maine to Georgia, enabling us to mature our plan of operations for the coming year, so as to embrace the many valuable improvements given us by superior skill and experience; and we would also say, now is the time to add to and beautify our door-yards, lawns, etc., etc., before the active spring work calls for all our time. Is there not a fruit or shade tree wanting, hedge to trim, lattice to repair, circuitous walk to extend, etc., etc? All this may be done and add much to the beauties of home, and the time hardly be missed. To us it is the most pleasant part of our existence. The frontispiece and account, (in a late Number of the Review,) descriptive of the enterprise of a social community at Evergreen Hamlet, was warmly approved by us. We believe in such communities springing up around our thriving cities, where circumstances and means will permit. It tends *much* to enliven and extend good and refined taste throughout the country. The residence of William A. Hill displays good taste, symmetry and architectural skill. But the interior of the kitchen or domestic department (we think) could be improved, viz: the pantry is too far from the kitchen, and the access of kitchen to dining-room is too circuitous to suit our humble views of convenience. In this country where domestics are scarce, we think the saving of steps of great importance; hence the necessity of arranging the kitchen department to that intent. Respectfully, B. S.

FOREST HOME, 2d month 14th, 1853

#### A new hardy Climber.

**STAUNTONIA LAMPOLIA.**—This new plant is as useful as the ivy for covering trees, says the Cottage Gardener, and will cover as much in four years as the ivy does in ten. Whoever needs a handsome, hardy, ever-

green, fast growing, strong climber, will find this to be one of the very best and newest of that class. The genus was named by Decandolle, and I believe, after Sir George Staunton. The natural order to which it belongs is called *Lardizabalade*, a hard name given by *Decaisne*, in 1837, and since adopted by Endlicher, Lindley and other first-rate dealers in hard names.

#### The Epigaea, or Trailing Arbutus.

HERE is a little darling, that loves its mother earth so well that it never can let her go, but clasps with new roots to her bosom as it creeps along, like the strawberry, plays at hide and seek in the dimples of the sod under the leaves, lays its white and rosy cheek down cunningly against its nest, and turns up its eye at you, twinkling with innocent roguishness, as if to say, "Is it possible you've been looking for me all this time?"

It is the emblem of the Village Girl, living just so close to earth, and practical home pleasures and duties, in the sweet faith of unbroken and unquestioned instincts and affections, wisely conscious or unconscious that the closer we cling to this earth of ours and all that belongs to our sphere, the more we shall get of heaven and of the sun and stars, whose influences blend with the earth at its very surface; while in deserting the sweet lowly home of the heart in ambitious ascension, and abandoning the duties that lie nearest us for speculative philosophies, we get more out of the sphere of solar light and heat, even as our balloons seem to rise toward the sun.

Under the icicled wintry boughs  
All cheerily on worked she;  
"In the dear God's love and tender smile  
How fair the earth to me!"  
Thus merrily sang as walked  
And musingly to herself she talked,  
"In God's sweet smile and his love so free,  
How dear is the earth to me!"

Day after day in her father's house  
How heartily on toiled she;  
O ne'er could child to a father's want  
More lovingly faithful be.  
Her arm was strong, and her hand was crown'd.  
But his touch thr' agh love was soft as down.

And still she sang, as sings the bee  
At its summer toil, unceasingly,  
"In God's dear smile and his love so free,  
How blessed is life and the world to me!"

The Epigæa incarnates the first pleasures of spring. It is a flower of faith and of friendship—one of the flowers of the Good God, that sends a thrill of rapture through us like the innocent and charming rustic girl it depicts; that brings the first flush of spring to the lover's heart, as he stoops to extricate its fragrant white and pink garlands from under the pine tags that shelter them from biting cold March mornings.

Its leaf is rough, "for her hand is brown, though its touch through love is soft as down."

With vegetable down the plant covers itself for protection, wrapping a sort of shawl round its limbs. 'Tis a hardy and yet a tender flower—tender as first thoughts of love that the young spring quickens in a virgin heart—delicate as the faint blush it has caught from the maiden's cheek. Finding some of them all pale, white and cold as the snow-drift that lately had covered them, and others so joyously rose-tinged—some odorless and others fragrant—I soon perceived that it was the very dawning of love and its softening March days that they spoke of.

I watched, to guess by their blush and their perfume which flowers my sweet-heart had looked at before me. Ah! those wood rambles in the dear old "North State?"—*Comparative Psychology*.

#### Planting Potatoes in Coshocton.

I SAID in the *Cultivator* of 15th February last, that I had been raising potatoes free from rot for several years, by planting early, and putting lime in the hills. I used the same means again last year, with the same result; while in another patch, in the same lot, planted about one month later, without liming, I lost about one half of the potatoes, with the rot.

With my present knowledge of the matter, I would recommend early planting, in a sandy soil, with about one half pint of lime in each hill. Planted in this way, I have never known potatoes to rot.

ROBERT SEEVERS.

COSHOCTON COUNTY, Ohio.

#### Vitality of Seeds.

MELON seeds have kept their vitality forty years and upward. Those of the sensitive plant sixty years. Oily seeds soon lose their vitality. They absorb oxygen, and chemical change takes place. Lindley states that seeds found in an ancient barrow with coins of the Emperor Hadrian, produced plants. Mons. de Moulin states that seed taken from a Roman tomb 1500 or 1600 years old, germinated. It is remarked that the seeds (in these cases) were protected from the influences required for growth, circumstances not easily imitated.

Corn, pulse and farinaceous seeds generally will live for a long time, if gathered ripe and kept dry.

Seeds sent abroad do well if kept in wax—such went to India, and kept well. They do not germinate so readily, but grow strongly. Cuttings of fruit trees, the cut ends carefully wrapped in wax, have been transported from England to India in perfect safety—apple, plum, have succeeded among others. Darkness is favorable to the germination of seeds, as decided by experiments.—*N. Y. Farmer's Club*.

#### Forced Asparagus.

At the exhibition of the London Horticultural Society, February 15, 1853, forced Asparagus was exhibited, of which one hundred stocks weighed twelve pounds, raised in her majesty's gardens at Windsor, and to her was awarded the prize.

#### Catalogues of Vilmorin Andrieux & Co.,

HAVE been left with the Editor, to apprise him that this extensive agricultural seed store in Paris, France, is disposed to court American patronage. Among them is—*first*, a quarto description of all sorts of grains, grasses, and other useful seeds for the farm; *second*, a large quarto supplementary catalogue, containing lists of flower seeds, grains, grasses, etc.; evergreens, fruits, green-house plants, etc.; catalogue of garden seeds of various kinds, and a pamphlet containing lists of various fruit trees. In all these the prices are affixed.



## The Vineyard.

### PYRAMIDAL TRAINING.

MR. EDITOR:—With a view of rendering the cultivation of the vine less laborious, costly, and more hardy and productive, combining both beauty and harmony, a great many of the French vine growers follow the mode of training the vine in cones, or to say better, pyramids. After having prepared the ground by deep trenching in good order, it must be laid out in parallel lines eight feet apart; there must, the first year, be set checker-wise along these lines, small stakes eight feet apart also. You then trench the ground opposite each stake, large enough to give room for all the roots to be spread out. These trenches should be thoroughly cleared of stones, which in the end would cause trouble in setting out the posts. The young vines early in autumn are to be set out in these trenches, the roots spread without confusion. Not a root should be cut or shortened unless it has been broken and damaged; the strongest stem or vine is the only one to be left outward, all others should be laid as if they were roots. These trenches are then loosely filled with soil, as the eyes of the plant thereby run less risk through the winter.

This manner of setting out young vines allows the roots a full chance of penetrating the soil in every direction, and the heat of

the sun reaches them gradually and more thoroughly.

In the spring, as soon as the weather is favorable, the earth should be cleared down a little from the young plants, so as to lower the level of the soil collected about the stake, and the stems or branches upon the main stem are to be pruned; only one good eye is left. The shoots as soon as they grow long enough should be tied to the stake. There should not be allowed more than two to each vine.

The following year these two shoots should be pruned down to a single eye. But should there be only one sprout, the pruning-knife must leave upon it two eyes. From these there will accordingly be two shoots, and in due season they should be topped and tied to the stake; the wood by this means becomes stronger.

In the spring of the fourth year, which is when the vine buds for the third time, the posts are to be set up where the stakes stood. The two stems are then to be pruned, one to five and the other to six eyes. They are to be turned spirally around the posts, both in the same direction, leaving about three or four inches interval between each twist. Each of the stems is to be fastened at the upper end to the post.

The two uppermost shoots also are tied and topped, when they are large enough. Some fruit is borne this year.

As for the posts they should be round, strong, and straight, six inches in diameter, and six feet in height above ground, made of locust, red cedar, or some other durable wood. The end that is put into the ground should be well burned or pitched.

In the fifth year the pyramids must begin to be brought into form. They may be made triangular, square, five or six sided; but a round form is preferable—having no salient points, it is not inconvenient like the others. The two uppermost stems are pruned as before, and with them the spiral always in the same direction is continued. The other stems on side runners, are cut down to two or three eyes and are left gadding.



When the blossom has fallen and the berry is formed, the shoots on the side runners are nipped down to six eyes. They are kept short to allow the vine a free circulation of air. The uppermost shoots are topped also and tied as before. At this time the vine has not more than one-eighth its height, and scarcely a sixth of the breadth which it has yet to attain, and furnishes from twenty to thirty clusters.

In the sixth year, the pyramids begin to ascend and look shapely. The two uppermost sprouts are pruned as the year before, one down to five eyes, and the other to six, and the spiral is continued, care being taken to wind and bind them before the buds begin to show out, for fear of breaking them off and spoiling the regularity of the cone. The last year's sprouts on the side runners are now cut as before. If there are lateral sprouts on these, they are not suppressed, but according to their strength are left with one or two eyes at most. The uppermost stems are tied up and topped when too long, as before. In the seventh year all the same processes are performed, the same as the previous year, and from fifty to a hundred clusters are gathered from every vine.—During the eighth and ninth year, the same attentions are given, until the spiral has reached the top of the post. From this time forth whatever surmounts the post is to be pruned down every spring, while the side runners are to be allowed to grow a little longer than before.

#### Wines.

Wines tested at the house of L. Rehfuß, President, January 29th, 1853; beginning with Mr. Longworth's specimens, all new wines—good Catawba being assumed 100:

Traminer, rated at 70.		
do. No. 2, " 70.		Some thought it better.
N. G. Howe, " 74.		Better than Traminer.
Dr. Young, " 73.		Like Catawba.
Cox, - - " 70.		{ High perfume; Mosher, marked 100.
Danville, - " 50.		{ High flavor, Brace; others poor.
Marion, " 53.		Poor, ethereal.
Lee, - - " 69.		Peculiar aroma.
Union Village, " 63.		High flavor, peculiar.
Blue Black, " 53.		Poor.
No. 17, " 57.		Like Herbemont, poor.
Winter, - " 24.		Some marked 0.
Thatcher, - " 37.		Equal to Isabella.
Clinton, - " 38.		{ Like Schuylkill; not considered a wine grape.
Salce, - - " 37.		Lacks flavor, very light.
No name, - " 53.		Like Herbemont.
New Era, - " 60.		Sherry flavor, good.
Clermont county, " 71.		Like Catawba.
Fermented on skin, " 31.		Marked 0 by three.
Isabella, " 37.		Bad, poor.

It must be remembered that these wines were made in very small parcels, and that they are all supposed to be new.

Other wines tested at the house of L. Rehfuß, Saturday, January 29th, 1853, and marked by each taster :

Catawba,	1845,	Rehfuß,	rated	83.	Very fine.
"	1846,	"	"	85.	Very delicate.
" (Ohio)	1848,	"	"	87.	Good.
" (Ky.)	"	"	"	93.	"
"	1852,	McConkey,	"	53.	Sweet, ladies'.
"	1851,	S. Rintz,	"	70.	Good, sweet.
"	1851,	Mottier,	"	86.	Very good.
"	1852,	Yestman,	"	90.	Excellent.
"	"	"	"	88.	Fine.
"	"	J. Rintz,	"	91.	Fine, very good.
"	"	G. Sleath,	"	84.	Very good.
"	"	McConkey,	"	86.	Good.
"	1850,	Mosher,	"	94.	{Ethereal, was frozen 2 weeks.
"	1850,	Buchanan,	"	88.	Good new wine.
"	1850,	"	"	89.	Good.

Mr. Rehfuß then brought on his experimental wines, manured and not manured, with the subjoined results, on trial :

Catawba,	1851,	manured,	rated	97.
"	"	not manured,	"	89.
"	1852,	manured,	"	100.
"	"	not manured,	"	92.

} Better than other  
new wines.

Some suggested, that though the manured wine of 1852 was more mild and better perfected, it would not be so good in future years, as an older wine.

Other wines were then introduced, viz :

Schuylkill or Cape,	Buchanan,	rated	70.	Fair.
Isabella,	1848,	"	39.	Poor.
"	1852,	"	35.	"
Missouri,	1848,	"	—	Spoiled.
Foreign wine,	(Hock,) 1846,	"	45.	Very pleasant.
"	"	"	71.	Very bitter.

A second trial was then had with Mr. Rehfuß' manufactured wine, No. 27, which was declared to be the best wine tasted to-day—even when drank with a very fine and high priced Hock, of Foster's brand. ●

#### Turbid Wine Cleared.

*To the Cincinnati Horticultural Society.*

GENTLEMEN:—I have recently noticed some of the wine of 1851, that was turbid, and ill flavored. I had heretofore seen wine of this character cleared, and its fine flavor and good quality restored within a week. Mr. Schneicke recently showed me

some wine of this character. I drank the same wine at his house, ten days later, perfectly clear, and of superior quality. He had drawn it off, and added to it one-fifth more of the sediment of the wine of 1852, and in five days it was perfectly clear and of fine aroma and flavor. This has heretofore been kept a secret by our wine merchants. It will be one of great value to our vine growers. Respectfully,

N. LONGWORTH.

CINCINNATI, March 19, 1853.

#### Rehfuß' Wines and Theory.

*To the Wine Growers' Association.*

GENTLEMEN:—On last Saturday I had an opportunity, with you, of tasting the wines of Mr. Rehfuß, and regret to say that I could not entertain the enthusiasm expressed by some others in regard to his wine produced upon prepared soil. It may be agreeable to drink here, but I fear it would not be so if it were carried through a hot climate; besides, it is well proved that it is not the wines that contain the most potash, which have the finest quality. I beg Mr. Rehfuß to refer to the analysis made by Mr. Bouchardat, and he will find that good wines contain one-third less potash than bad.

The use of potash upon the vines is not a new thing. Mr. Persoz, professor of science at Strasburg, was the first to give the plan of applying it, not to add to the quality of the wine, but to increase its quantity; such, however, is not our desire. This country has a reputation to make, and to establish it we must attend particularly to the quality.

In applying potash to vines, we should first know whether the land contains enough, and next the exact quantity to be added. But I would ask Mr. Rehfuß how many vine dressers are able to make this analysis?

I entreat you, gentlemen, to try other

methods, such as are used in all wine countries. I am certain that you would there find good advice, which would not make you incur the risk of destroying the quality of the wine. The Catawba has a peculiar bouquet, in destroying which you do an immense damage to your country.

With respect, gentlemen, yours, etc.,

CINCINNATI, February 1.

FOURNIER.

The above communication having been read at the Wine Association, Mr. Rehfuß made the following rejoinder :

*To the Wine Growers' Association.*

I intended to have passed Mr. Fournier's communication in silence, but as it particularly refers to my method of dressing the soil and making wine, I shall answer it in the hope of diffusing information.

He expresses his regrets that he could not entertain "the enthusiasm manifested by others in testing Mr. Rehfuß' wine; it may be agreeable *here*, but I fear it would not pass through a hot climate." He then refers me to Bouchardat's analysis, and the statement that good wines contain one-third less potash than bad. As the gentleman has not given any reasons why my wine could not be carried through a hot climate, all practical experience relieves him therefrom. As to the potassa, the gentleman does not say whether my wine contains more or less, but shields himself behind Bouchardat's analysis, which I believe he has misapplied.

Potassa is found in the sweet Catawba juice, dissolved in and combined with malic, citric, and especially tartaric acids; with the last it forms bitartrate of potassa, or cream of tartar. As this salt is little soluble in water, and more or less so in liquids containing alcohol, therefore the formation of alcohol during the fermentation of our sweet grape juice, is followed by the precipitation of

crude tartar, and this precipitation will be greater in proportion to the sweetness of the juice and the consequent excess of spirit produced. Common sense, then, without Bouchardat's analysis, will teach us that the weaker wine, having more water, will hold more of these salts in solution. The specific gravity of our Catawba juice is seldom below ninety degrees, and will therefore hold the least proportion of cream of tartar in solution, after having been fermented.

Secondly. The gentleman says—"The use of potassa is not a new thing. Mr. Persoz was the first who applied it, not for improving the quality, but to increase the quantity of wine." But long before Persoz, Professor Leibig, in his Agricultural Chemistry, presented the relations of the different salts in the soil to the plants, the quantities taken up by them, etc. Even the Romans recommended the application of potassa, or wood ashes to the vine.

Persoz has not been fairly represented. That author says my system of culture should ward off this danger, since the vine will constantly have suitable nourishment; but it is well understood that in insuring to the vine dresser the quantity of the product, we shall not pretend to assure him of its quality—the latter always depends upon the temperature. It will be observed, he says, "My method or system," not the potassa, "insures," not increases its quantity, and so on.

Persoz' method gives to every square foot of soil about six pounds of burnt bone dust, a few pounds of waste animal matter, and some plaster of Paris, and in the spring silicate of potassa. Every vine dresser would attribute the increased crop to the bone dust and animal matter rather than to the silicate of potassa.

The gentleman says further, we should

know whether the land contains potassa enough. This is just what I have stated to the society for many years, and by referring to the reports of the State Board of Agriculture of Ohio, the gentleman will find detailed analyses, which corroborate my experiments, and that our soils do not contain nearly enough alkali for the immense yearly consumption of the vine. And lastly,

He entreats the society to try other methods, respecting which he unfortunately leaves us in the dark, but which we should thankfully receive, for we acknowledge ourselves to be in our infancy as to vine dressing, and are aware that we have yet much to learn. The whole communication does not contain the least information. As to the gentleman's insinuations, I will simply remark that it is easier to criticise than to amend.

My method of dressing the soil and improving the wine, is very simple and plain. Our Catawba wines always exhibited an excess of a disagreeable acid, affecting the taste and stomach; this increased rather than diminished with age. On examining our wines I detected the presence of malic acid, which forms some salts of potassa that are soluble both in wine and alcohol. Having discovered the enemy of our wine, the question arose, how shall we overcome it? I procured from Europe, the publications of the wine growers' association, and the works containing the analyses of the vineyard soils and especially of the fruit from the time of setting to the period of maturity of the grape. In examining these chemical tables, I discovered that nature first produced in the grape the lower organic acids, especially malic acid, which predominates. But it struck me that as the potassa and soda increased, the quantity of malic acid decreased, giving place to tartaric acid and sugar, which may be looked upon as a transforma-

tion of the lower acid into the higher. By comparing the analyses of the soils with the quality of the wines produced, I found that those containing a certain quantity of alkalis always yielded a better wine, and alkalis as well as acids possess the property of changing starch and dextrine into sugar.

On the authority of these tables, as well as my own experience, I have applied wood ashes to one of my vineyards since 1849, in the proportion of about two barrels to the acre or two handfuls to each vine; this is worked into the ground at the first hoeing. Manure was also applied. The results of this was that the wines of 1850, 1851 and 1852, from this vineyard, have been milder, more palatable and devoid of unpleasant acidity. The Catawba flavor becomes more mild and free from its wild taste. The wine clears sooner, the product of crude tartar is greater; and containing a less amount of salts of the lower organic acids, the wine will be more fit for long keeping and transportation, and better adapted to the manufacture of Champagne, since it does not require so much sugar to cover the acidity. The theory of this seems to be that the potassa in the vines, having a stronger affinity for the tartaric acid than for the other organic acids, combines with it, forming the less soluble salt, bitartrate of potassa. New tartaric acid is formed at the expense of lower organic malic and citric acids, until nearly all of these are transformed into tartaric acid; provided always that the roots find the necessary quantities of alkalis in the soil.

Now when my sweet Catwba juice, supposed to have been subjected to the above combinations, is fermented, it will precipitate the crude tartar, which is not soluble in wine, and the liquid, holding the least quantity of soluble matter, will be clear and mellow, and will undergo less change from al-



teration of temperature or transportation. My views are at variance with those of Mr. Persoz. He attributes the quality of the wine to the temperature alone, while I consider also the quantity of potassa, which improves the quality of the wine by removing a part of the acid in the shape of a soluble salt.

L. REHFUSS.

#### Grapes and Wines.

##### *To the Wine Growers' Association.*

GENTLEMEN:—If we attempt to follow the rules prescribed for the planting and cultivation of the grape in Europe, we shall fall into errors; for most of the cultivators are not men of science, and our native grapes, our soil and climate, require a different culture. When the great Kossuth was here, he had with him some of the proprietors of the celebrated Tokay wine vineyards, upon whom I called, with Mr. Buchanan, to get light on grape culture. I believe one piece of information satisfied us, as we left them soon after having obtained it. It was, that they pressed out their wine, as the Germans pressed their cheese in Pennsylvania a century since, with a rope and a stone suspended to it, which it appeared had been their method for centuries, never having made any change. My estimation of Tokay wine was greatly lessened, on drinking some at Mr. Adae's, (Foreign Consul,) which was a sweet wine of no superior flavor, with much sediment. I was told it was deemed the better for being turbid. Wine that I have seen here kept sweet by a charm, I thought equal to it; and our sweet Isabella and Catawba wines, made for sweet ladies, without any charm, but by the addition of the best loaf sugar, before fermentation, I thought far superior.

But when we come to the manufacture of wine, where men of science have investigated the subject, we must look to Europe for

information. Our general rule has been to mash our Catawba grapes before pressing. I learn from Mr. Fournier, that this is never done in France, where it is intended to make white wine; that all rotten, decayed and green grapes, are carefully picked off, and the bunches, the same day they are gathered, put on the press, and the juice pressed out, the last running being left separate; that the mashing of the skin and stem is injurious to the flavor of the wine. Our rule of action, common sense, sanctions this doctrine. Where red wine is the object, there is a full mashing of the grapes, and a fermentation on the skins. I shall hereafter never mash the grapes, unless red wine be my object. I shall always keep the last pressing, say one-fifth of the quantity, separate, and require this practice from all of whom I buy must or wine; but as an inducement to pursue this rule, I shall pay the same price for the last as for the first pressing, and use it for distillation. Wine some seasons from the Catawba grape, has the strong aroma flavor of the fruit; other seasons, the wine from the same vineyard, though of good quality, has little or none of this aroma flavor. Can you give the cause for this difference?

French writers inform us, that the grape vintage varies greatly in the different departments of France. In a good season, from 200 to 2,400 gallons per acre. Prone as we are to believe in miracles, in these days of "Rochester knockings," the 2,400 gallons is rather too large a dose to swallow, even if it were the produce of our Catawba grape.—What may at first view render us more incredulous, is the fact, that I am assured that this great yield is in a very poor soil. It is true, if we can believe the reports from North Carolina, they have a greater yield from their Scuppernong grape, and a very few vines cover an acre of ground; for it seems

that they are trained to the skies. This may account for the singular fact, that where three pounds of sugar are added to the gallon of must, the wine often turns to vinegar. As our doctrine is, the pure juice of the grape and no sugar, unless where we wish to make a sweet wine for sweet ladies, we do not wish to train our grapes above the clouds. A cause of the want of sugar in the Scuppernong in North Carolina, is in part owing to its high training. In Europe, the vine is kept near to the ground, to increase the saccharine principle. In the part of France where 2,400 gallons of wine are made from an acre, the roots are planted from 12 to 18 inches apart, and kept near the surface. I would suggest the planting of our Catawbas, as an experiment, some two feet apart, and to keep the bearing branches near the surface. It may improve the quality,

and as the vineyard gets age, the quantity. From the specimens we have seen of the Scuppernong wine, we deem it of no value. As North Carolina has finer native grapes than any other state, and among them the Catawba, they should extend the vine culture, and make superior wines.

If the French do not change their practice of mashing from three to a dozen varieties of grapes together, and make a wine from their grape of the finest aroma and flavor only, our Catawba wine will have the preference, not only from its superior aroma and flavor, but as a more healthy wine.

As the Missouri is of delicate growth, and hardy, it would be a better grape to experiment on in close planting, than the Catawba.

Yours, truly,

N. LONGWORTH.

CINCINNATI, February 20, 1853.

## Transactions.

### THE CINCINNATI HORTICULTURAL SOCIETY.

Has kept up its regular meetings, which have been of considerable interest, especially the discussions upon different subjects connected with Horticulture. The Japan Pea, which has been liberally distributed by Mr. Ernst and has excited much interest among other societies, was again brought upon the tables, and its excellent properties were pressed upon the members. It should have room to grow, say four feet each way, when it will be very productive. When cooked, it was found to be savory, like the "Horticultural Bean," and in boiling, the skin separated so as to be readily removed from the surface of the water. This plant is recommended especially as a food for stock. The members considered that Mr. Teschemacher's decision respecting it, as reported in the proceedings of the Massachusetts Horticultural Society, were not correct, and that it was not a *Cajanus*, but a *Phaseolus*,

as described in the pages of this work, last year, by Mr. James Ward.

The discussion upon the best methods of preserving vegetables during winter, afforded an opportunity for the diffusion of much useful practical information—a cool airy cellar and dry sand were recommended for most roots.

The embellishment of the city water-works was assigned to a committee who have reported from time to time, their proposed plans of improvement, consisting of inclosure, paths, planting trees and shrubs, and the introduction of fountains, in all which the society feel that they are but aiding in the execution of the excellent ideas of the able superintendent of that department of the city, Captain Lewis Warden, who honored the society by referring to them for advice.

Among the flowers exhibited, the follow-

ing may be mentioned, *Forsythia viridisima*, and *Wiegela rosea*, by A. H. Ernst, of Spring Garden; beautiful Hyacinths in great variety by L. Rehfuess, from bulbs he imported last fall; by S. S. Jackson, a new *Tropæolum*, called *Lewissii*, a hybrid raised by his son Lewis—beautiful; and the exquisite and showy new *Celestial*, a really good new plant, and perfectly hardy, the *Dicentra spectabilis*. The tables have been well covered during the months of February and March, with beautiful specimens of fine apples, which have furnished a fruitful topic of discussion. The Canada Red has been duly appreciated and exhibited in connection with Rawle's Janet, White Pippin, Newtown Pippin and other favorite sorts.

The following ten sorts were recommended by the society for an orchard of one hundred trees, to be planted in this vicinity, their adaptation for general purposes being considered.

1st. After a spirited discussion between its admirers and those of the Rawle's Janet, the superiority of NEWTOWN PIPPIN was at last decided by a vote of ayes 11, nays 9.

2d. *Yellow Bellefleur* was proposed as the second best, when it was proposed to substitute RAWLE'S JANET. Carried, ayes 10, nays 8.

3d. *Yellow Bellefleur* was proposed as the third best. Mr. Bush moved to substitute Pryor's Red; lost, 8 to 6. The WHITE BELLEFLEUR was then suggested and its claims urged; carried, 8 to 4.

4th. The *Vandervere* of New York, or Newtown Spitzenberg of us, was proposed by John Young, when Mr. Graham moved to substitute the PRYOR'S RED; carried, 8 to 4.

5th. *Yellow Bellefleur* was again moved, when WHITE'S PIPPIN was proposed; lost 6 to 5, when the original motion prevailed, 6 to 2.

6th. *Fall Pippin*, after a free discussion, was adopted unanimously.

7th. *Rambo* was proposed and carried, 6 to 4.

8th. *Summer Rose*, carried.

9th. *Golden Russet*, carried unanimously.

10th. *Early Strawberry* or Juneating, lost by a close vote, when the WHITE PIPPIN was adopted by a large vote.

The whole matter was referred back to the Fruit Committee for consideration and

report. At the next meeting a portion of them rendered the following

#### REPORT.

The Fruit Committee feel the difficulty of the task assigned them, of selecting ten varieties of apples, for an orchard of one hundred trees, to be planted in this vicinity—and their general properties and adaptation to all purposes being considered. So great is the variety of this favorite fruit which claims to be superlatively good, and so varied are the tastes of the public to be consulted, that the difficulty of making a selection is greatly increased—besides this, we are confined to those which have been fully tested *here*, and shall be obliged to throw aside the claims of many which may have impressed themselves upon our palates with a most agreeable smack, and which enjoy the prestige of high names and superlative local characters, because we have not sufficiently tested them. The following are, however, reported:

July and August,	2, Summer Rose;
July and August,	2, Strawberry;
September,	2, Fall Pippin;
October,	4, Rambo;
Nov. and Dec.	5, Golden Russet;
Nov. and Dec.	5, Vandervere;
Nov. and Dec.	20, White Bellefleur;
January,	15, Pryor's Red;
Feb. to April,	40, Rawle's Janet;
March,	5, Newtown Pippin.

100 trees.

T. H. Yeatman then moved to amend by increasing the number of Newtown Pippin, by reducing that of the Rawle's Janet, so as to be 25 to 20. Carried by the casting vote of the chairman.

Mr. Hatch moved to substitute the White Pippin for the Newtown. No question taken.

It was then moved that the White Pippin be substituted for the Strawberry. Lost.

And next that the Yellow Bellefleur be substituted for the Vandervere or Ox-eye.—Carried.

As amended the report was adopted.

#### YELLOW RAIN.

The following paper was read by the Secretary:

Some of our most observant citizens noticed on Saturday morning last, March 26th, a peculiar yellow substance on the pave-

ments, and floating upon the water in the gutters, bearing a strong resemblance to flowers of sulphur. As noticed in the papers, it was observed on the top of a steamboat; the gardeners also found it floating in their rain-water tanks; and it was seen in considerable quantity drifted to the leeward side of small ponds, on both sides of the river, and on this side extending as far as below Mill creek, and at Spring Garden on the west, and Walnut Hills on the east. It has also been reported in the papers at Louisville and at Zanesville.

My attention was first directed to it by Dr. I. S. Dodge, who pointed it out to me in various places on stagnant gutters, whence we collected specimens for examination. One of the newspapers announced that there had been a shower of sulphur—a hasty conclusion drawn from its yellowish appearance.

Prof. Locke, in a communication to the Commercial, gives an account of his investigations, in which he suggests that this substance, containing silex, may perhaps be animalculæ.

It will be remembered that on Friday there were many indications of an approaching storm, the clouds were lowering and the wind gusty and unsteady. Late at night it continued warm with the same indications, and in the morning it subsided in a gentle shower, after which this phenomenon was observed.

We have all often read of the colored snow of the northern regions, which we are told is caused by a fungus, *Hæmatococcus nivalis*. Other colored rains and snows have been reported by various writers, which have been referred to different causes, such as the pollen of plants, animalculæ and other minute substances. We are told by meteorologists, and may satisfy ourselves by simple observation, that currents of air often assume a rapidly whirling and upward direction, under which circumstances light bodies might be very easily elevated from the surface of the earth, transported on the upper currents of the atmosphere to an immense distance, and then deposited upon the surface of the earth. After collecting this material at different points and examining it with a microscope of moderate capacity, and comparing the appearance with the pollen of the red cedar, *Juniperus virginiana*, with the

plates and description of the pollen of terebinthinate plants, given by the celebrated physiologist RASPAIL, I have been forced to the conclusion, that the most plausible explanation of this "yellow rain," is, that it is the pollen of the cypress tree, *Taxodium disticha*, and not that of the elms and maples of our vicinity. From near the mouth of the Ohio river to the Gulf of Mexico, with an average width of fifty miles, there is an immense extent of cypress swamps, one half of which was probably in blossom ten days ago; a small whirlwind passing over this, would have taken up enough pollen to have supplied extensive showers of yellow rain.

I have suggested that it is the pollen of the cypress without knowing its peculiar configuration, (but which I hope soon to have an opportunity of examining.) My reasons for this conclusion are the similarity of the grains to those of the natural family of plants to which the cypress belongs; to the great extent of the habitat of that tree, its period of blossoming, and the comparative scarcity of other trees blooming at this season; but I am not prepared to assert that it does *not* contain silex, though that is a constituent of the pine family, nor that the minute objects are not animalcular shells, as hinted by the learned Professor, who has observed, but perhaps not *examined* microscopically the pollen of pine trees, on the great northern lakes.

This question gives a renewed impetus to the minute and critical observation of special botany. The grains are oval, or composed of a little sphere with a lobe attached at each end, the central portion appearing depressed in some of the specimens—the lobes not being exactly opposite, give, in many, a curved or bent appearance to the grain, the outline resembling a bean.

#### NECROPSY.

During the past month the society has been called upon to mourn the loss of a valuable member, who has taken a deep interest in its prosperity and an active part in the administration of its affairs. Mr. Reuben Resor's death was lamented by the society, and appropriate resolutions were adopted expressive of the feeling that existed toward a departed co-laborer, who had long worked with us in the good cause.

**The American Wine-Growers' Association**

HELD a very agreeable meeting on the 29th January, at the house of L. Rehfuß, when the following officers were elected :

*President*—L. Rehfuß.

*Vice-President*—T. H. Yeatman.

*Treasurer*—R. Buchanan.

*Secretary*—John A. Warder.

Several new members were present, and quite a large attendance rendered the test of wines quite an interesting affair. The result of the test, embracing many of the new varieties, is given on another page, in tabular form. In deciding upon the merits of the wines, *good Catawba* was assumed to be 100, and all below that grade was set down by each taster at such lower number as he deemed it entitled to, from the several lists the table was made out.

The next meeting was held on Saturday, February 26th, at the house of R. Buchanan, Esq. A communication from M. Fournier, respecting the Rehfuß wines of previous meeting, was read and made a topic of discussion. Mr. Rehfuß replied in another paper, (see article *Wines*, on page 324,) and a very interesting discussion ensued among the members. After which the discussion of the inspiring specimens upon the tables attracted their attention, and all were gratified with the beautiful display.

**Adrian Horticultural Society.**

At the annual meeting of this society, holden on Thursday evening of last week, the following officers were chosen :

*President*—D. K. Underwood.

*Vice-President*—William H. Scott.

*Secretary*—T. M. Cooley.

*Treasurer*—S. A. Lathrop.

*Librarian*—A. S. Cornell.

*Executive Committee*—J. W. Helme, B. F. Strong, B. W. Steer, Woodland Owen, and W. H. Scott.

At the close of the meeting, the members present had the satisfaction of testing the merits of choice specimens of Belmont, Rhode Island Greening, Herefordshire Pearmain, Swaar, Spitzenberg, and Black apples, presented by A. S. Cornell.

We are glad to learn that the society is in a flourishing condition, and that the members contemplate adding considerably to its library the present year.—*Watchtower*.

**Winter Show of Fruit at Albany.**

THE display of fruit was not large, but very fine—the greater part from western New York.

The Messrs. Haywards, of Brighton, made their usual superb display of apples, (twenty-six varieties,) besides two dishes of grapes in first-rate order in appearance and flavor. Mr. R. H. Brown, of Greece, made a fine display of twenty varieties of apples, extra fine specimens, eclipsing all the others in size and beauty. Messrs. Ellwanger & Barry offered forty varieties of pears, many of which were in tasting condition, and gave occasion for a very interesting and instructive gossip on winter pears. Mr. John S. Goold, of Albany, presented a dish of Inconnue Van Mons pear in nice condition—pronounced good; also Winter Nelis pear, and finely preserved Isabella and Catawba grapes. The names of the other contributors will be found in the following report, which we take from one of the newspapers :

*The Winter Exhibition of Fruit.*—There was exhibited at the Hall of the State Agricultural Society, says the Family Register, the most extensive and greatest variety of winter fruit ever collected in this city. The great bulk on exhibition came from the western part of the state, and but little from this section.

Ellwanger & Barry, of Rochester, had the greatest variety of winter pears, numbering forty different kinds. It is said to be the greatest variety ever exhibited in the United States. They also had thirty-eight varieties of winter apples, embracing some of the choicest fruits.

T. G. Yeomans, Walworth, Wayne county, six varieties of apples and two of pears.

N. & E. S. Hayward, Brighton, Monroe county, twenty-six varieties of apples, and two of Isabella grapes, one kept in sawdust and the other in cotton; the former appeared the best preserved.

Isaac Merritt, Penfield, Monroe county, three varieties of apples.

F. W. Lay, Greece, Monroe county, eleven varieties of apples.

Robert Brown, Greece, Monroe county, twenty varieties of apples.

A. Frost, Genesee Valley Nursery, twenty-four varieties of apples.

Judge Buel, and J. H. Watts, of Rochester, each five varieties of apples.—*Gen. Farmer*.

**Pennsylvania Horticultural Society.**

At the annual meeting of this society, held on the 18th of January, the following officers were re-elected:

*President*—General Robert Patterson.

*Vice-Presidents*—James Dundas, Joshua Longstreth, E. W. Keyser, W. D. Brincklé.

*Treasurer*—John Thomas.

*Corresponding Secretary*—Thomas C. Percival.

*Recording Secretary*—Dr. Thomas P. James.

*Professor of Entomology*—S. S. Halderman, A.M.

*Professor of Botany*—William Darlington, M.D.

*Professor of Horticultural Chemistry*—Robert Hare, M.D.

**Columbus Horticultural Society.**

At the annual meeting of the society, held March 5th, 1853, the following officers were elected for the ensuing year:

*President*—Benjamin Blake.

*First Vice-President*—Alex. E. Glenn.

*Second Vice-President*—Anthony H. Lazell.

*Corresponding Secretary*—Henry C. Noble.

*Recording Secretary*—George G. Comstock.

*Treasurer*—Joseph H. Riley.

*Council*—Francis Stewart, C. P. L. Butler, J. William Baldwin, and the President and Treasurer, *ex officio*.

*Garden Committee*—John Miller, for five years.

A few specimens of fine fruits and flowers were exhibited, and several members expressed the opinion that thus far the prospects are fair for a good crop of all the various fruits, and feel much encouraged to proceed in the labors and objects of the society, and express the hope that they will have the aid of our citizens generally, in prosecuting the laudable objects of the society.

**Genesee Valley Horticultural Society.**

The annual meeting of this society was held on the 5th of February. The following officers were chosen for the ensuing year:

*President*—J. J. Thomas, Macedon.

*Vice-Presidents*—L. Wetherill, Rochester; H. P. Norton, Brockport; R. G. Pardee, Geneva; Mr. Jeffrey, Canandaigua; Samuel Shadbolt, Wheatland.

*Recording Secretary*—James Vick, Jr., Rochester.

*Corresponding Secretary*—H. E. Hooker, Rochester.

*Treasurer*—James H. Watts, Rochester.

*COMMITTEES.*—*On Fruits*—P. Barry, H. E. Hooker, John Donellan, J. W. Seward, E. S. Hayward, L. A. Ward, J. W. Bissell, H. N. Langworthy, L. B. Langworthy, Zera Burr, George Ellwanger, Alonzo Frost.

*On Trees and Shrubs*—W. A. Reynolds, William Webster, R. Donellan, W. King, Joseph Frost, C. F. Van Doorn.

*On Entomology*—L. Wetherill, J. W. Seward.

*On Vegetables*—John Donellan, James Vick, Jr., Horace Hooker, James Buchan.

*On Botany*—L. Wetherill, Francis Trentman, Moses Long, Chester Dewey, G. H. Smith, P. Cooney.

*On Finance*—John J. Thomas, L. Wetherill, J. Vick, Jr., J. H. Watts.

*Executive Committee*—J. J. Thomas, W. A. Reynolds, L. Wetherill, P. Barry.

There was a very nice display of winter apples and pears, and some of the best preserved Isabella grapes we have seen were presented by Mrs. M. Jewell, of Rochester. Among the apples we saw none so remarkable as Newtown Pippins, the largest and fairest we have seen shown, by Mr. R. H. Brown, of Greece. The committee report:

*Report of Fruit Committee, Winter Exhibition.*—Messrs. Ellwanger and Barry, Mount Hope Nurseries, exhibited twenty-three varieties of pears, and twenty-four of apples. James H. Watts, Rochester, Northern Spy apples. R. H. Brown, Greece, twenty-two varieties apples. Messrs. A. Frost & Co., Genesee Valley Nurseries, eighteen varieties apples. H. White, Rochester, eight varieties apples. S. Miller, Rochester, St. Jermain pears. Mrs. M. Jewell, Rochester, Isabella grapes in a most beautiful state of preservation. Messrs. Bissell & Hooker presented a new and promising variety of apple, name unknown to the committee.

**New York Horticultural Society.**

The annual meeting of this society, for the election of officers for the ensuing year, was held at Stuyvesant Institute, on Friday evening, December 10, 1852, and the following gentlemen were elected:

*President*—Shepherd Knapp.  
*Vice-Presidents*—W. Coventry, H. Waddell, W. G. Hunt, W. W. Livermore, John Groshan, and N. K. Anthony.

*Treasurer*—J. C. Parsons.

*Corresponding Secretary*—Geo. W. Curtis.

*Recording Secretary*—P. B. Mead.

*Librarian*—A. Bridgeman.

*Literary Committee*—P. B. Mead, and F. J. Smith.

*Finance*—Charles Oakley, H. M. Scheifelin, and A. A. Leggett.

*Fruit*—T. Hogg, Jr., W. S. Carpenter, and Charles More.

*Cut Flowers and Plants*—J. E. Rauch, T. Dunlap, and J. W. Wood.

*Vegetables*—J. Cutlip, D. Clark, and John Tick.

*Distribution of Seeds, etc.*—J. Newhouse, C. F. Lindsley, and A. Knox, Jr.

*Premiums*—George Gangee, and Alexander Gordon.

#### **New York State Agricultural Society.**

THE annual meeting was held at Albany on the 9th and 10th. The attendance was large, the proceedings interesting, and generally harmonious. The following officers were elected:

*President*—Lewis G. Morris, Westchester county.

*Vice-Presidents*—1st district, Richard L. Allen; 2d district, William Kelly; 3d district, George Vail; 4th district, John Beekman Finlay; 5th district, George Geddes; 6th district, Joel W. Bacon; 7th district, Silas Burroughs.

*Corresponding Secretary*—B. P. Johnson, Albany.

*Recording Secretary*—Erastus Corning, Jr., Albany.

*Treasurer*—B. B. Kirtland, Albany.

*Executive Committee*—Theodore C. Peters, J. T. Blanchard, William Buel, John A. Sherman, Charles Morrill.

#### **Mobile Agricultural and Horticultural Society.**

THIS society is now completely organized, and from the interest manifested by the officers and members, we anticipate the most valuable results. The executive committee just appointed will soon take the subject in hand, and arrange, it is expected, for the

first exhibition of products in May. The officers are:

*President*—C. C. Langdon.

*Vice-Presidents*—Chester Root, George N. Sewart, John C. Hodges.

*Corresponding Secretary*—W. W. McGuire.

*Recording Secretary*—Samuel Penny.

*Treasurer*—A. L. Pope.

The President has appointed, as prescribed by the constitution, the following committees:

Executive Committee, Committee on Agriculture, Committee on Horticulture, Committee on Floriculture, Committee on Vegetables, Committee on Premiums.

#### **Missouri State Agricultural Fair.**

A BILL has passed the legislature of this state, which was introduced by Mr. Maupin; it appropriates \$1000 a year, for four years, for the purpose of offering prizes for fine stock productions and manufactures. The *Observer*, of Booneville, Missouri, says: "The bill proposes to hold the Fair in the vicinity of this city, and as the people of this county have already organized a society with some \$500 or \$600 subscribed, we do not doubt it could be raised to \$1200 or \$1500, which, with the state premiums, would afford prizes that would be contended for by a large number of persons."

#### **Illinois State Agricultural Society.**

THE friends of agriculture met in convention, January 5th, in Springfield, for the purpose of organizing the "Illinois State Agricultural Society." They concluded their deliberations at the evening session, in the Representative Hall, by adopting a constitution, and electing their permanent officers.

*President*—James N. Brown, Sangamon county.

*Vice-Presidents*—John A. Kennicott, Cook county; J. E. McClun, McLean county; Smith Fry, Perry county; Michael Collins, Adams county; Francis Arenz, Cass county; H. C. Johns, Platt county; C. W. Webster, Marion county; Ichebaugh Mitchell, Wayne county.

*Recording Secretary*—Paschal P. Enos, Sangamon county.

*Corresponding Secretary*—Bronson Murray, La Salle county.

*Treasurer*—E. M. Powell, Peoria county.

A large number enrolled their names as members of the society, and paid in the entrance fee of one dollar.

Resolutions adopted :

1. That the society apply to the Legislature for an appropriation of one thousand dollars a year for two years.

And a committee of three was appointed to apply for said grant.

2. That the committee be instructed to draft a charter for the society, and present it to the legislature.

3. That a committee be appointed to draft an agricultural address to the people of the state of Illinois.

4. That five hundred copies of the constitution and proceedings of the convention be printed, and each member be furnished with a copy.—*Plow-Boy*.

*The Prairie Farmer* adds :

The legislature of this state have appropriated \$1000 each year for two years, to the new Agricultural Society ; not without difficulty, owing to the opposition of a considerable number of members ; and that the appropriation for the State Geologist, Dr. Norwood, has been increased from 3,000 to 5,000 dollars, with \$500 extra, for topographical maps. These are indeed good tidings.

## Editorial Notices.

### Agricultural and Horticultural Meetings.

As it is very desirable for all those who can attend these great jubilees, to have them early presented, I have taken great pains to gather the first news to be obtained, and set it before the readers of the Review ; and now make another report of progress, in which, however, some Fairs are mentioned that have been already presented. A standing list will be found on the 2d page of the accompanying Advertiser, to which those interested can always refer.

The New York State Agricultural Society proposes to hold its Fair at the village of Saratoga Springs, on the 20th-23d of September next.

The Ohio State Fair will be held at Dayton, September 20th-23d.

The Cincinnati Horticultural Society will hold their Autumnal Exhibition, September 20th-25th.

The Massachusetts Horticultural Society will hold their Fall Exhibition, September 21st-23d.

Rochester Horticultural Society, from 16th to 17th of September.

The Pennsylvania Horticultural Society, at Philadelphia, — of September.

The Pennsylvania State Fair will be held at Pittsburg, from 27th to 30th September.

The Michigan State Fair, at Detroit, from the 28th to the 30th of September.

The Indiana State Fair, at Richmond, from the 28th to the 30th of September.

The Wisconsin State Fair, at Watertown, from the 4th to the 7th of October.

The North-western Fruit Growers' Association, at Chicago, from the 4th to the 7th of October.

The Southern Central Agricultural Society of Georgia, at Augusta, from the 17th to the 20th of October.

From these statements, it will appear that several of the most important and prominent of these associations have unfortunately selected their periods so as to prevent those most interested attending more than two or three ; thus, New York, Ohio, Cincinnati and Boston, all occupy the third week in September ; Michigan, Pennsylvania and Indiana, the fourth week ; Chicago, Illinois and Wisconsin, the first week in October.



**The Augusta Rose.**

THIS new Noisette, about which so much has been said, and for which so much has been anticipated, is at length to be placed before the public, as will be seen by the circular of Messrs. Thorp, Smith, Hanchett & Co., of Syracuse, in the Advertiser. It will be distributed on the first day of May next, properly packed for transportation to any part of the United States. It is described as being the best yellow climbing rose, the freest bloomer, and the most deliciously fragrant. Though now hailing from New York, it should be recollected that this is a Buck-eye plant, having been raised from seed by the Hon. Jas. Matthews, of Coshocton, Ohio, by whom it was presented, with exclusive privilege, to Mr. A. Fahnestock, of the above mentioned firm.

**Highland Nurseries.**

I HAVE received a catalogue from Messrs. Phelps & Putnam, of Syracuse, N. Y., which embraces a fine collection of the usual varieties, including, however, many of those which are new, and have attracted notice within a few years.

**The Grape-Vine.**

A Practical Treatise on the Culture and Treatment of the Grape-Vine—Third Edition, enlarged and revised—pp. 330. By J. Fiske Allen. Price \$1.

To my enterprising friends, Ward & Taylor, I am indebted for an opportunity of examining this work, which has recently been issued from the press of C. M. Saxton, New York. The body of the work is devoted to the house-culture of grape-vines, by which we mean the cultivation under glass, with or without the addition of artificial heat. The public may congratulate itself that the introduction and diffusion of practical information on this subject, through the medium of such useful works as this, has induced a large increase in the culture of the finer grapes,

which is now quite common in various parts of the country, and within the reach of every family in moderate circumstances; though formerly confined exclusively to the domains of the wealthy. Cold grape-vines are easily managed, and yield a fair return in any latitude within the United States, while, with the aid of artificial heat, this luscious fruit may be produced in succession through the summer. In the work before us, the author, speaking of culture in the open air, describes some foreign varieties which may yield a crop in latitudes north of 40°, especially in cities; but recommends the Isabel-la and other American varieties. When treating of vineyard culture, he, of course, quotes Western authorities; but they do not figure largely in his work. R. T. Underhill, H. W. S. Cleveland and others nearer home, have been more liberally quoted; and Sidney Weller, of North Carolina, still more largely.

He describes the different systems of training, which are illustrated by several cuts, in none of which are the plans alluded to which are to be seen everywhere among our extensive vineyards.

The author quotes Mr. A. G. Semmes regarding the culture of grapes in Florida, from whom he learns that the Scuppernong, so highly praised in the South, is not a native of North Carolina, but a Grecian grape, known as the Alaric, and from which the finest wines of Greece are made. He gives a long list of varieties of native and foreign grapes; the former is not nearly so full as it might be, either in number or description. In speaking of the Catawba, he quotes Mr. Adlum as to its being a native of Maryland, and admits that it is the hardiest and most productive of the American varieties.

To all who are anxious for information upon the subject of grapes in grape-houses, the perusal of this work is recommended.

## METEOROLOGICAL TABLE.

CINCINNATI, FEBRUARY, 1853.

THERMOM.			WEATHER.			RAIN.	SNOW.	Date.	Winds, etc.
Date.	Min.	Max.	Sunrise.	Noon.	Sunset.				
1	33	60	fog, clear	clear	clear	....	....	1	Calm; light SE. and S; calm.
2	48	51	cloudy	rain	cloudy	10	....	2	Light SW. and NW.; calm.
3	38	44	fog, cloudy	cloudy	rain	107	....	3	Calm; light E. and NE.; squally at night.
4	47	51	cloudy	variable	cloudy	....	4:50	4	Light W. and NW.
5	31	33	rain	hail	snow	1:45	....	5	Brisk N.; light N.
6	24	33	cloudy	clear	variable	....	....	6	Light N.; calm at eve.
7	18	25	do.	variable	clear	....	....	7	Light N.
8	12	32	fog, clear	clear	do.	....	....	8	Calm; light SW.
9	5	16	clear	do.	do.	....	....	9	Light NW. and N.; calm.
10	18	39	do.	do.	do.	....	....	10	Light SW.; brisk SW.; light SW.; calm.
11	33	48	do.	do.	do.	....	....	11	Calm; light S. and SW.
12	32	45	fog, clear	do.	variable	....	....	12	Calm; light N.
13	33	42	variable	do.	cloudy	....	....	13	Light N.; brisk SW.; stormy at evening.
14	15	30	clear	do.	clear	....	....	14	Light SW.
15	38	44	cloudy	cloudy	rain	43	....	15	Light SE. and SW.
16	41	44	fog, cloudy	clear	clear	....	....	16	Light SW.; brisk W.
17	28	43	variable	do.	do.	....	....	17	Calm; high SW. and E.
18	36	51	fog, clear	do.	cloudy	....	....	18	Calm; light SW., W. and N.
19	28	32	fog, var.	variable	clear	....	....	19	Light N.
20	23	35	clear	do.	variable	....	....	20	Light NW., W. and SW.
21	36	57	fog, clear	clear	clear	....	....	21	Calm; light SW.
22	46	48	rain	rain	rain	92	....	22	Light S. and W.
23	30	31	snow	variable	variable	....	20	23	Brisk NW.
24	19	34	clear	clear	clear	....	....	24	Light NW., W. and SW.
25	31	38	variable	snow	cloudy	10	....	25	Light SW.; calm and clear at eve.
26	32	55	fog, clear	clear	clear	....	....	26	Calm; calm.
27	45	50	rain	cloudy	drizzle	58	....	27	Light S.; thunder and rain at night.
28	50	61	clear	clear	variable	....	....	28	Light S.; brisk SW. and W.
Rain and snow water, inches,								4.67	4.70

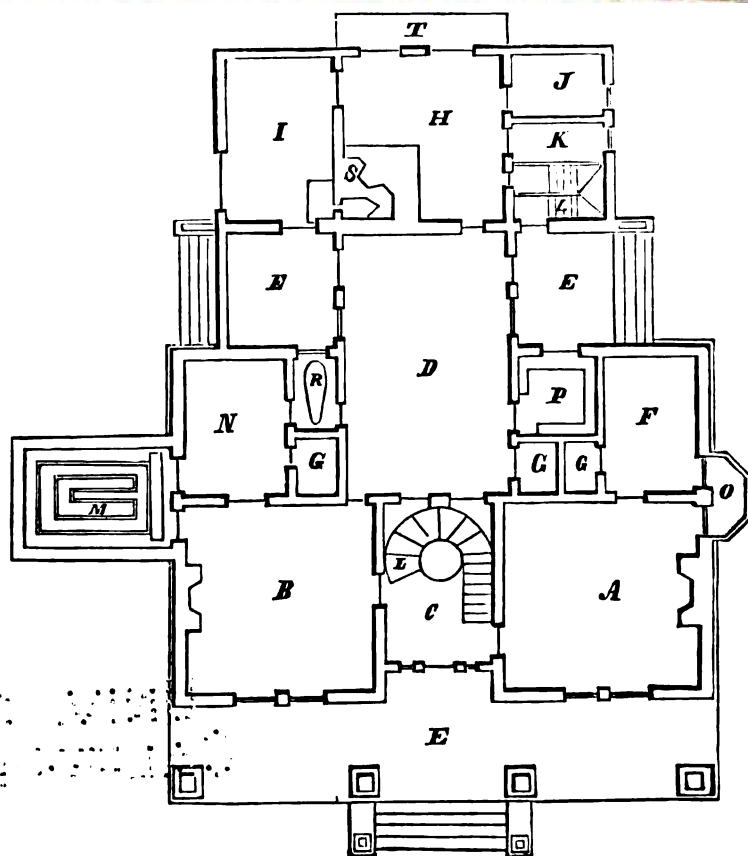
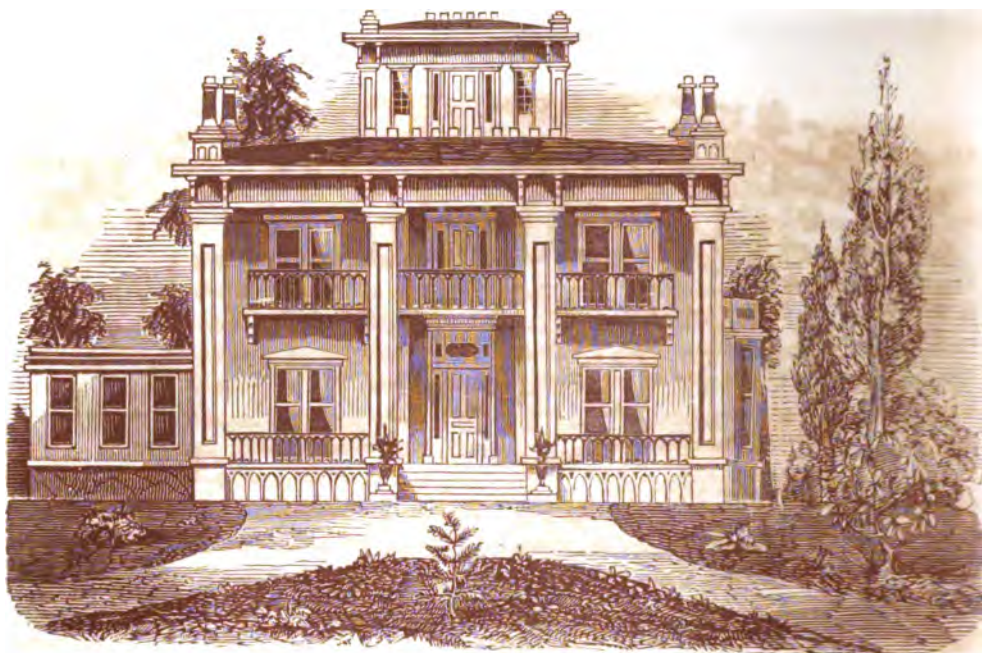
## REMARKS.

Lowest temperature, .....	5:00	Depth of snow of the three winter months last past,	6 35 inches.
Highest temperature, .....	61:00		
Range, .....	56:00		
Mean temperature of the month, .....	36:42	The mean temperature of the month is about a degree and a half below that of the last ten years.	
do. do. February, 1852, .....	38:96	The winter has been unusually mild, and navigation of the river entirely uninterrupted. The remarkable feature of the month was a storm on the evening of the 13th, beginning at half past five o'clock, and continuing four hours and twenty minutes, during which there were some pretty severe puffs; yet no damage occurred of any description in this vicinity, but injury was sustained on the river by boats, at some distance both below and above the city. This is more storm-like than anything that has occurred for several years.	
do. do. do. 1851, .....	42:48	JOHN LEA.	
do. do. do. 1850, .....	35:66		
do. do. do. 1849, .....	32:43		
do. do. do. 1848, .....	38:60		
do. do. do. 1847, .....	37:33		
do. do. do. 1846, .....	36:25		
do. do. do. 1845, .....	42:12		
do. do. do. 1844, .....	39:45		
do. do. of all the above, .....	37:97		
do. do. of the 3 winter months last past, .....	37:72		

**UNPRECEDENTED FALL OF SNOW.**—The fall of snow which occurred at Syracuse on the morning of the 3d inst., deserves a special notice. It commenced at three o'clock in the morning, and at seven o'clock *two feet of snow* had accumulated—being at the rate of six inches per hour. We do not believe the records of meteorology will furnish any parallel to this. Syracuse seems to have been the centre of this extraordinary snow

deposit. At Geneva, 50 miles west, and at Utica 50 miles east, but from two to four inches fell. Twenty miles north of Syracuse there was about 15 inches, and at Rochester but a mere sprinkle. During the four hours in which the snow fell thickest, it was unaccompanied by wind; but in the course of the day more snow fell, and was considerably drifted.—*Albany Journal*, of March 3.

Univ. of  
California



Premium Plan.



VOL. III.

MAY, 1853.

No. 8.

## Vegetable Physiology.

### CIRCULATION OF THE SAP.

MANY of the readers of the Review seem disposed to smack their lips at the occasional mention of specimens exhibited at the agreeable meetings of the American Wine Growers' Association; others again, there are, who look with no small degree of jealousy upon this sprightly department of our scientific investigations. I am now happy to refer both classes to the following valuable papers in controversion of the opinion which may prevail among them, that those meetings merely afford opportunities for the effervescence of trifling wit with the escape of the sparkling Champagne. On the contrary, as to the wines, they are examined and tested with a view to their production in the purest and best state; and their manufacture involves a considerable knowledge of chemistry and the laws of physics, which are duly brought to bear upon the subject. One of the main objects of the Society, however, is, to discuss practical and theoretical subjects, upon which the basis of all good culture is founded. Of the latter class, when discussing the practical matter of summer pruning of grape-vines, the theory of

the circulation of the sap was very naturally introduced. Many of the members were well prepared to advocate the philosophic doctrines advanced by the most eminent philosophers, and furnished papers accordingly. Our excellent president, however, who is still a devoted student, has examined the best and most recent works upon the subject, and thence produced the following analysis and condensation, in the shape of a report, which, although it may not have convinced all, and especially those whose minds were previously filled with another theory, will, notwithstanding, amply repay them for a careful perusal.

This investigation has required the introduction of peculiar expressions and principles, connected with modern science, which, throwing the greatest light upon the subject, could not be avoided.

*To the American Wine Growers' Association.*

GENTLEMEN:—We have two methods by which to explore to a certain extent the mysteries of vegetable life.

1. *Microscopical observation*, which will

give a very accurate knowledge of the structure of the plant and the changes in form of the various parts during their growth.

2. *Chemical experiments*, which show us the constituent elements of the plant, its means of sustenance and the transformation of its substance, which occurs during growth. In presenting to you the latest observations with the microscope, the component parts of plants, their properties, actions and physical power, it will be easy for you to form an idea of their nourishment and the circulation of sap, without using an hypothesis which is contradictory to the structure of the plant, sending nourishment at pleasure, up and down, in vessels which have been proved to contain nothing but air, and which hypothesis has failed to show the power which could produce a retrograde action of the sap.

In spring, when the new formation commences, we observe between the wood and bark of trees small bubbles called cells, which, under a magnifying power of 200, we find presenting on some part of the walls a yellowish-colored, flat, longitudinal body, called the *cell-grain*, from which springs a network of yellowish stripes, called the *azotized lining*, along the inner surface of the cell. The rest of the cavity is filled with a clear liquid containing a few small grains. Bringing these cells into contact with tincture of iodine and sulphuric acid, the exterior wall will exhibit a blue color, showing the presence of starch; but the interior lining is contracted, and hangs loose from the wall, forming a small sac which is colored yellowish-brown by iodine, indicating the presence of albumen. The wall of the cell is colorless, transparent, flexible and elastic, not soluble in water, but this liquid is transmissible through it.

1. *Contents of the cell*.—The azotized lining, which, under a magnifying power of 420, has been seen in continual movement,

and seems to bear the closest relation to the vitality of the cell, as the diseases of plants always commence in this tissue, as observed in the potato disease and decaying fruits.

2. *The watery solution contained in the cell*. Albumen, sugar and alkalies, combined with muriatic, sulphuric, carbonic? oxalic, tartaric, citric and malic acids. These combinations are found in great varieties in plants. Both potassa and soda are generally found, one of which often takes the place of the other. Few acids are found together, organic or inorganic. In very active cells, endowed with the power of formation, traces of ammonia and carbonic acid were found. In the most vegetating cells, these substances undergo continual chemical change.

3. *Insoluble or albuminous contents of the cell*.—These are the protein substances, amylum, (starch,) inulin, fat oils, wax, resin, essential oils, coloring matter and crystals of oxalate, carbonate, tartrate and sulphate of lime.

**CHANGE OF THE CELLS.**—Each vegetable cell from the time of its origin, is a very small, tender and roundish bubble, and undergoes a continual change, and varieties of the tissue depend upon these changes; so we find in all plants cells in different degrees of development.

1. *Change by expansion*.—Each cell as a closed bag takes up the nutriment through its walls, the current of nutritious fluid coming in at one end and going out at the other; hence, these ends being especially nourished, will be increased, and the roundish cell is extended and changed to an elongated one, as is beautifully explained in the longitudinal cells of cotton, hemp and flax.

2. *Change by deposition of new layers*.—By accumulation of nourishment necessary to the extension of the cells, a new internal cell is formed between the outer wall and the nitrogenous lining, and this formation

continues till the cell is filled up. These depositions vary in shape and form; some are thick, some broad, some simple rings, some spiral and some reticulated.

3. *Change of the cell-walls by chemical process.* (a.)—In the spring when the sap begins to ascend, the wall of the cell lying between the wood and bark, is but a jelly, which is eventually transformed into cell-matter, and the cells continue in a state between jelly, starch and cell-matter.

(b.) When the cell-wall is changed into cell matter, the nutritious liquids passing through it contain various materials which will be deposited and perhaps will produce a changing effect on the cell-matter. In the same manner the nitrogen lining of the cell is dissolved and penetrates the cell-wall. In the exterior cells, silic especially is deposited; in the interior, the salts of lime.

(c.) At a certain age, the cell-wall will be partly or wholly dissolved, and this occurs in whole groups of cells, and in such a manner, that where those above and below are in contact, the walls will be so dissolved that the row of cells is changed into a connected tube. These tubes have been very improperly named, according to their shape, ring, spiral, reticulated, slit and porous vessels; for as soon as this connection of cells occurs, their sac is absorbed and they contain nothing but air.

The cell-wall often retains its form, while the cell-matter is decomposed and the contents are lost; oxygen is taken up from the air, carbonic acid exhales, while tannic and humic acids are formed as is exhibited in cork.

THE EPIDERMIS consists of closely connected cells, with slit openings, allowing a free communication of the atmosphere with the interior of the plant. A transverse section of a cabbage leaf exhibits first waxy matter, second separation layer, third the cells.

*Formation tissue.*—The whole plant in its first development, is nothing but formation tissue; gradually the groups of cells are formed. In monocotyledons as the gramineæ, the vessels are separate; in dycotyledons the vessels are connected on every side. In monocotyledons the formation tissue changes its character early; we soon find a clear, dry and pellucid cell-tissue, incapable of new formations; whereas, in dicotyledons, new cells are always forming on the exterior. In the spring, this formation tissue is easily observed in our trees, where it forms a circle round the whole stem, new cells outside of a condensed tissue within. The condensed layers of the bark in vines, is thrown off from year to year as it is successively formed.

The *Parenchyma* contains gum, sugar, starch, oils, protein substances, resin, etc. In a review of these facts, we find that the parenchyma contains the nutriment. The vessels show us the path which the sap has taken; the epidermis regulates the evaporation of humidity and the exhalation of gases, and lastly, in the formation tissue we find the power of growth.

*Period of growth.*—At a certain age, hight and full development of its organs, the animal is called full-grown; it takes its food regularly, always rejecting a part; but in the plant, we know of no period when its growth is accomplished; it can not live without growing, it never wears out any matter, it only takes up and does not reject any, all new matter received is used up in the construction of new formations. The result of vegetation is, that plants continually increase in weight. The growth of plants is divided into three acts—first, reception of matter; second, assimilation or change of matter; third, formation of matter. Plants receive their nutriment in a very diluted, liquid state, the superfluous water and the gases are carried off by the leaves. The growth of the

plant is not only merely dependent upon the presence of nourishment, but a great many chemical and physical powers exert their influence, such as air, humidity, light, heat, electricity, capillary attraction, etc.

*Process of assimilation.*—Very little has heretofore been known respecting this process, and of the changes of matter in plants.

*Motion of the sap.*—A plant has no mouth, stomach nor intestinal canal, wherein to digest its nourishment, which must, therefore, be received in a prepared state, and as there is no vascular system, the sap, or dissolved food must pass from cell to cell, and when these are all filled, the question arises, what power can force it through the cells? and here we are led for an explanation to exosmosis and endosmosis, and evaporation, the former of which may be illustrated by the familiar experiment of a bladder filled with water being immersed in albumen, when, from the attraction of the former by the latter, by means of exosmosis, the water passes out through the membrane to unite with the albumen; and the converse experiment of a bladder half filled with albumen immersed in water, when the attraction of the latter to the former is so great that the membrane not only becomes filled with the mixture, but even bursts with the excess of fluid. The attracting power of gum, sugar and albumen to water may be represented by the figures 1, 2, 3. The attracting power of albumen for water is equal to  $2\frac{1}{2}$  atmospheres. The power of the sap as it rises in the vine is equal to  $1\frac{1}{2}$  atmosphere, which, with the aid of endosmosis, is abundantly sufficient to carry the sap upward from the root. We always find the youngest and most thin-walled cells at the extreme points of the roots; they also contain a remarkable quantity of azotized substances, which, if not albumen itself, must be some relative protein combination, possessing the same physical

and chemical properties, and therefore able to attract with great power the liquids of the soil to the cells of the roots. In the young germ, leaf and buds, the thin-walled cells are found filled with protein substances which easily take up the liquids from below, and quickly evaporate the superfluous water.

*Motion of sap in the plant.*—The buds and other forming parts take their liquids from the nearest cells, these from those nearest below, and so on to the root, which supplies itself from the soil. The cells through which this sap flows, form elongated bags; they quickly run through their process of life, their liquids are absorbed, their place is supplied by air, and they are changed into what have been erroneously called vessels.

*Evaporation.*—This occurs in all young parts of the plant, through the leaf and appendages, and the young stem emerging from the bud, and continues until these parts are covered with a layer of waxy or resinous substance. Without the evaporation of the excess of water and other volatile substances which have not been transformed by chemical action into sugar and starch, etc., the plant could not grow; for the liquid which comes up from the roots contains the nutritious matter in a very diluted state, which is concentrated by evaporation and otherwise changed by chemical action, and this change progresses upwardly. Thus it is asserted that the sap of a sugar-tree drawn high up yielded 80 per cent. more sugar than that which was drawn below.

This evaporation is influenced by physical powers such as the pressure and temperature of the atmosphere and its hygrometric condition.

*Organic element.*—The result of our investigation is, that water, carbonic acid and azote, are the only nutriment from which plants can prepare their organic substances. Plants can not grow without a proper quan-



tity of water, which is taken up in excess, and it must be chiefly carried off by exhalation; we may therefore take it for granted that the oxygen and hydrogen needed by the plant are abstracted from the water, but whether carbon and nitrogen are taken from the soil or from the air is not yet ascertained. We know that oxygen is exhaled during the day, and carbonic acid during the night.

In the preceding remarks we have given to you an accurate description of the structure of the plant, and proved sufficiently, that what by the old theory were named *vessels*, are nothing but changed cells, which having performed their functions, are transformed into elongated and other layers; the different cell-walls having had the power of attraction and endosmose, are changed and dissolved; therefore the so-called *vessels* are deprived of the power of conducting sap upward.

We have shown the fallacy of the vessel theory, but we have still to contend with that advocating the elaboration of sap in the leaves, which, by the old theory, has to be sent three or four times to and from the leaves to the fruit before it is properly elaborated, in vessels whose existence is yet to be determined.

The proximate constituents of the plants are grouped according to their elementary substances. The first comprise such as are composed of carbon, hydrogen and oxygen, and are called non-azotized substances, as, vegetable fiber, starch, vegetable mucus, gum, sugar, wax, oils, resin, vegetable acids.

**SECOND GROUP.**—Azotized substances having besides the above named elements, nitrogen added, as, albumen, caseine, gluten, chlorophyle, vegetable bases; all these articles being formed from water, carbonic acid and ammoniacal gas.

The sap consists of these articles, besides inorganic matter, the last named ones being

taken up from the soil. Let us now describe one of those articles, a principal constituent of the plants, the starch, and the changes it undergoes, without sending it to the leaves to have it elaborated. Starch is the principal content of the cells; it is transmissible into them, and is mainly formed in those parts of the plant least exposed to the light; therefore the roots and the interior of the stem contain the most of it. Young parts of the plant contain no starch but cells consisting entirely of carbon 21, hydrogen 21 and oxygen 21, which by the action of acids, are changed into starch, consisting of  $C_{12}$ ,  $H_{20}$  and  $O_{10}$ ; gum; dextrein: the last, by longer action of acid and heat into sugar,  $C_{12}$ ,  $H_{22}$ ,  $O_{11}$ ; and this by dyastasis or ferment into alcohol,  $C_4$ ,  $H_6$ ,  $O_2$ ; and this at a higher temperature diluted with water and with ferment, into vinegar,  $C_4$ ,  $H_8$ ,  $O_3$ .

Cell-matter and starch are particularly formed in the roots, and are transmissible through the cell-walls. During their change of place they are transformed into dextrein and sugar, as with the sugar-tree, occurs in the trunk. In fruits, and particularly in the grape, this change is brought on by organic acids at the time of ripening. We know the equivalent parts of starch, but by what means the wise Creator forms it out of water and carbonic acid, is beyond the reach of our understanding.

By the last stated facts you see how easily Nature forms and transforms the principal part of the plant during its change of place, and by certain acids and alkalies.

By the old theory, in the grape, for example, the sap is first brought there to be elaborated into starch, chlorophyle and acid; secondly, sent to the fruit; thirdly, taken again from the fruit to the leaves, there to be elaborated into starch and dextrein, and the malic to be transformed into tartaric acid; fourthly, to be carried back to the fruit;

and fifthly, to finish the work, the dextrien and chlorophyle are brought back to the leaf, the first to be elaborated into sugar, the latter, perhaps, into diastasis or ferment, being finally sent to its last resting-place, the fruit.

I will not longer trespass on your patience. I have presented you with the results of the latest chemical analyses and microscopical observations of the distinguished philosophers, A. Schleiden, Moleahott, Leibig, Mulder and others.

I ask your indulgence for my English, and assure you it is no easy affair to condense this large field of high scientific investigation into a small, popular discourse.

L. REHRUSS.

#### Circulation of Sap in Grape-Vines.

THE grape-vine, although a climbing shrub, with enlarged joints, is organized upon the same general principles as all exogenous plants, or such as are developed from seeds having two cotyledons, and increase of growth by an accumulation of their substance around the external surface of the stem or trunk, in the form of concentric circles, one of wood, and one of bark annually.

Such plants are all composed of two sets of vessels for the circulation of their vital fluids, with numerous woody fibers, giving firmness and constituting the principal bulk of the plant, and a covering of bark shielding the more delicate parts from the influence of atmospheric changes.

The only apparent difference in the grape-vine, from the majestic trees of the forest, is in the more porous texture of its stem. Both have vessels of various structure, mostly of a spiral or dotted form, for conveying the sap, through the woody substance, from the roots to the leaves; and another set of vessels of a more cellular structure, situated between the wood and bark, and returning the sap toward the roots. Alike they go on increasing in dimensions from year to

year, each renewing its life, by the formation annually of a new set of vessels for the circulation of sap, as well as a new layer of wood and bark, having all the vitality of a young plant. The duration of such plants, therefore, is limited only by the exhaustion of their proper nourishment in the soil, the most important part of which is taken in by its numberless mouths, situated at the extremities of the roots, in the form of soft and tender spongioles.

In giving my views of the circulation of the sap in grape-vines, it is not necessary to enter into a discussion of the germination of the seed, or the first motions that are communicated to the vital currents by the influence of heat and moisture. The first impulse in the embryo plant, is a search after food, which is obtained by thrusting its radicle downward into the earth.

In a fully developed vine, when the sap is set in motion by the warmth of spring, its nourishment is taken in by the spongioles and conveyed upward through the woody substance of the stem, by the spiral and dotted vessels to the buds, which are thereby expanded into leaves, and elongated into branches, which in the grape-vine differ essentially from fruit bearing trees, as the apple, pear, etc.

These branches in a vine of mature age, throw out from three or four of the first joints, a fruit bearing stem from each joint, with a leaf of small dimensions on the opposite side of the joint. After forcing out these fruit buds, the prolific power of the branch becomes weaker and there is only formed a tendril, but with a more vigorous leaf opposite, and these continue growing alternately in succession to the close of the season.

In many fruit bearing trees, preparation is made for fruit a year or two in advance, by the formation of spurs, either on the

sides or extremities of the branches, these spurs provided with flower and leaf buds from the same point to prepare sap for the fruit.

In the grape-vine it is inferred, that the leaves of the bearing branches of the same year's growth receive the sap containing its nutriment from the roots, through the large spiral tubes, which extend through the entire length of the stem, into these parenchyma and cellular tissues, and then in some manner not perfectly understood, elaborate or prepare it for the formation and growth of all its organized parts, as the woody fiber, the bark, the fruit and the roots.

After the sap has been thus conveyed and distributed in the leaves and undergone this important change by the action of air and light it is returned through a different system of vessels, or a sort of cellular tissue, between the wood and bark, depositing in its course, in the form of woody fiber, bark, gum and certain vegetable acids, a very large proportion. Another portion in its descent passes into the peduncle or stem of the fruit bunches, and is deposited or secreted into the cells of the berries and seeds. The remaining portion of this elaborated sap returns to the roots which are thereby enlarged, elongated, and multiplied in the same proportion as the branches, these parts always maintaining a reciprocal relation with each other.

In proof of the important function of the leaves in the development of the plant, and perfection of the fruit, a few facts may be cited. During the severe frosts of the winter of 1851-2 it is well known that in many instances all the buds of the canes of the previous summer's growth were entirely killed. The stem although abounding in sap in the spring following, bleeding freely when cut with a knife, never protruded any new parts or increased in size, though re-

maining green and fresh till toward the close of the season, when all that part of the stems above the crown, where new branches and leaves were forced out, perished and dried up.

Again, after fruit has been formed, removal of the leaves above the bunches will produce a total suspension of the growth of the berries until some of the axillary buds above are forced into development and expansion, when the fruit will recommence its growth, but in consequence of such interruption will seldom ripen in this climate. It is also well known that no enlargement of a branch or stem will take place when denuded of its leaves.

Roots also remain stationary from the same treatment, and the whole plant receives a shock often endangering its vitality.

A correct knowledge of the circulation of the sap, and the true function of the leaves, in the grape-vine, it is apparent, must have a direct bearing upon the whole system of summer pruning in our vineyards—a system which I regret to say, is often practiced with very little knowledge of the physiology of the plant, and with serious consequences to the product as well as future welfare of the vine.

The blossom of the grape, having a very minute calyx and only five small petals, which are separated from the base and drop before impregnation takes place, can hardly be supposed to elaborate sap to carry on the functions of reproduction, even in this incipient stage of its growth. The leaves must therefore furnish the principal resource for the growth and perfection of the fruit.

The question now arises, how many leaves above the bunches are necessary for the most perfect maturity of the fruit? Reasoning from the natural habits of the vine, and I believe experience will sustain the position, that the best and most perfect

bunches of grapes will be produced on those branches that have not been abridged in their growth at all.

Our interest, however, as well as convenience sometimes clashes with the operations of nature. The vine in our vineyard is altogether in an artificial state, and we find it is better to sacrifice a little in the quality of the fruit in order to secure the future preservation and welfare of the vine. If all the bearing shoots are allowed to grow without restraint, there will be a deficiency of new wood formed for an ensuing crop. Hence the practice of shortening or pinching in.

Experience in this country, with our native or American vines, has not yet determined the exact number of leaves that may be best for the fruit as well as the plant itself. It must be left to the judgment of the vinedresser or his employer. The rule I have adopted in my own vineyard, is to allow four leaves if there is but one bunch on the branch, and two additional leaves to every additional bunch of grapes.

This appears to me about as short clipping as the fruit can bear without sustaining injury, and the sooner the branch is pinched off, or shortened in, after the requisite number of leaves have grown, the better.

By pinching in thus early, we keep back or prevent that copious flow of sap, which would be expended in an undue elongation of the bearing branches, and more of it consequently directed to the growth of vigorous and healthy wood for the succeeding year's crop.

S. MOSHER.

#### Theory of Circulation.

A VALUED member of the association, who modestly prefers to sign only his initials, has handed in the following interesting paper, in order that the reader may know that there are two sides to the question, and that all the members are not yet ready to

give up what have been considered established facts and theories. The fanciful theories advanced in this paper are a favorite topic with the author, but are not indorsed by the EDITOR. The quotations and reference to various authors are such as have commonly governed our views—although a question has often been started, whether the philosopher did not sometimes see what he desired to behold.—Ed.

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DR. WARDER:—The members of the "Wine Association" of this county, for the last three meetings, have had before them for discussion the question of the best mode of pruning the vine; while in the course of investigation by different members, the subject has been expanded, and in their arguments, the range embraced nearly all the important points in the science of Vegetable Physiology. The questions of the flow of the sap; the chemical changes; its ascent in the plant, and the functions of the leaves, have all been placed before us for explanation. I was prevented from attending the last meeting of the association, and therefore did not hear the paper read by one of our members, which denies the return of the elaborated sap from the leaf to the rootlets, and that evaporation is the only office performed by the leaf. Now, as this is a very important point, and as the functions of the leaves of plants, as I conceive, furnish the substance of the growth of the vegetable, and also furnish the oxygen for the existence of animals, I have, therefore, in the following communication, given the opinions of some of the ablest writers on vegetable physiology, with experiments on the subjects before us; and in addition to these opinions I have introduced the agency of electricity as the great principle of vital action in all stages of vegetable growth. If this communication will be of any interest to the

readers of your Review, please to give it a place, whilst the subject of the paper is undergoing discussion by the Wine Association.

#### **Of the Constituent Elements of Plants.**

Leibig says that carbon enters into the composition of all plants, and of all their different parts and organs.

The substances which constitute the principal mass of every vegetable, are compounds of carbon with oxygen and hydrogen in the proper relative proportions for forming water. Woody fiber, starch, sugar and gum, for example, are compounds of carbon with the elements of water. In another class of substances containing carbon as an element, oxygen and hydrogen are again present; but the proportion of oxygen is greater than would be required for producing water by union with the hydrogen. The organic acids met with in plants with few exceptions, belong to this class.—A third class of vegetable compounds contain carbon and hydrogen but no oxygen, or, less of that element than would be required to convert all the hydrogen into water.—These may be regarded as compounds of carbon with the elements of water, and an excess of hydrogen; such are volatile and fixed oils, wax and resins. The juices of all vegetables contain organic acids, generally combined with the inorganic bases or metallic oxyds, for these metallic oxyds exist in every plant, and may be detected in its ashes.

Nitrogen is an element of vegetable albumen and gluten. Nitrogen forms only a small portion of plants, but is never entirely absent from any part of them. We now perceive that the development of a plant requires the presence, first, of substances containing carbon and nitrogen, and capable of yielding these elements to the growing organism. Secondly, of water and its

elements; and lastly, of a soil to furnish the inorganic matters which are essential to vegetable life. In addition to the elements mentioned, it is necessary to the perfect organism of a plant to have the influence of light and heat; and the sun being either a solid body of luminous matter or a body surrounded by a luminous atmosphere, containing in itself the elements or principles of light, magnetism, electricity and heat,—these elements reach the earth in rays or beams which furnish direct evidence of being composed of light and magnetism. They also contain electrizing and caloric principles which, when brought into action in an appropriate medium, produce and develop electricity and heat. The rays of the sun are also, under certain circumstances, refracted, reflected and absorbed. Among the chief and most important media of conduction and absorption, are vegetable organized beings, trees, shrubs, and herbs of all descriptions. These abound in pointed terminations, and contain a vascular system composed of vessels and cells abounding with juices, which qualify them to become the recipients and most ready and perfect conductors of electricity in any of the specific modifications.

The solar rays thus absorbed during their passage through the vegetable organs, become themselves decomposed while they effect many electro-chemical changes in their organs. Thus the rays of light are elaborated in vessels of the flowers and leaves, expressly adapted to the processes of separating and fixing the coloring principle.

Other portions of the solar rays serve to stimulate the glandular and other vessels of the leaf, and to produce and propel the proper juices of the plant, which are then carried down through the returning vessels of the bark, or deposited in the appropriate vessels of the vascular system.

The whole of the unabsorbed rays pass downward to and through the roots, and thus constitute the *descending current* of solar vegetable electricity.

Each individual specific process is performed by specific means ; each particle of the ray is devoted to a specific purpose, and the combinations and decompositions are effected by organs specifically adapted to the express purpose and no other.

The surface of the earth is another grand medium of absorption. It receives the direct rays of the sun, one portion of which is reflected, another is absorbed, and becomes the great agent in effecting the electro-chemical processes which are carried on within the earth's surface, during and by which the decomposition of water, the oxydation of metals, the formation of gaseous bodies and other great natural phenomena are uninterruptedly and forever induced. It is during the induction of these phenomena, the electrizing process is begun and perfected, and that not only by the decomposition of the sun's rays themselves, but also by an energy which they exert upon matters within the earth's surface, and the results of this electrizing process are the separation of the principle of magnetism and the formation and development of heat and of electricity.

The electricity so developed, is distributed, if not through the mass, at least over the surface of the earth, and in this sense the earth may be considered as the reservoir both for the supply and absorption of electricity.

If an electrified body charged with either species of electricity be presented to an unelectrified body (but without touching it) its tendency in consequence of the law of induction, is to disturb the electrical condition of the different parts of the neutral body.—The electrified body induces a state of elec-

tricity contrary to its own, in that part of the natural body which is nearest to it ; and consequently a state of electricity similar to its own, in the remote part. Hence, the neutrality of the second body is destroyed by the action of the first, and the adjacent parts of the two bodies having now opposite electricities, *will attract one another.*

We now see that the chemical changes going on in the earth, change and prepare the juices of the soil for induction, or attraction into the spongioles and rootlets, and as plants have no organ analogous to the mouth of animals, they are enabled to take up the nourishment necessary to their support only by absorption or inhalation, as the chyle into the animal lacteals, or the air into the lungs. The absorption of non-elastic fluids by the epidermis of plants does not admit of a doubt. It is proved indisputably that the leaves not only contain air, but do actually inhale it. Now, the substance which is attracted or inducted into the rootlets of a plant is called sap. Before the sap can be rendered subservient to the purposes of vegetable nutrition, it must be immediately conveyed to some viscus proper to give it elaboration or immediately distributed throughout the whole body of the plant, and is kept in motion by the electric agency, if not all the year, at least at occasional periods, as the bleeding of the plants in spring and autumn sufficiently illustrates. The plant always bleeds most freely about the time of the opening of the bud ; for in proportion as the leaves expand, the sap flows less copiously, and when they are fully expanded it entirely ceases.

But this supervision is only temporary, for the plant may be made to bleed again in the end of autumn, at least under certain conditions. If an incision is made in a tree, after a short but sharp frost, when the heat of the season or the mildness of the air is

about to produce a thaw, the sap will flow again.

From what has already been said, some idea may be formed of the electric theory advocated by Dutochet and other writers on vegetable physiology, which may be rendered still more intelligible by tracing the sap in its ascent to the extremities of the plant, its elaboration in the leaf and in its descent to the rootlets.

The cause of the ascent is the solar light which, in its passage through the vegetable vessels operates by induction, and attracts those fluids which have been prepared by electro-chemical agency in the immediate neighborhood of the rootlets of plants. The prepared fluids, now become sap, are propelled along the sap vessels by the conjoint agency of induction and of developed electricity; and a portion of the sap is in its passage, taken up by "endosmose" or lateral attraction through the substance of the vegetable membrane, and becomes diffused by a series of attractions exerted between fluids of different densities, till it is finally deposited in a perfect state in appropriate cells.

The leaves are among the most important of all the vegetable organs, inasmuch as the life of the plant may be said to depend upon them, they being the organs of respiration, perspiration, and of the elaboration of the nutritive and specific fluids of the plant.—One great use of the leaves, Sir Humphrey Davy observes, is for the exposure of the sap to the influence of the air, heat, and light. In the leaves much of the water of the sap is evaporated; it is combined with new principles, and fitted for its organizing functions, and probably passes in its prepared state, from the extreme tube of the alburnum into the ramifications of the cortical tubes, and then descends through the bark.

The leaves, Towers says, perform the office of the lungs or respiratory organs; they are connected with air vessels by which they communicate with the atmosphere, and are enabled to inhale oxygen, and exhale carbonic acid, and aqueous vapor. The leaves of plants and the lungs of animals elaborate the vital fluid conveyed into their cells; and after effecting certain important changes, they return the prepared specific fluids by another set of vessels, which are destined to convey them to other organs, whose function it is to distribute those nutritive fluids, to the remotest parts of the vegetable or animal body.

One of the earliest and most satisfactory experiments on the functions of the leaf and return of the proper juice through the leaf and leaf stalk, is that of Doctor Darwin, which was conducted as follows: A stalk of the *Ephorbia helioscopia*, furnished with its leaves and seed vessels, was placed in a decoction of madder-root, so that the lower portion of the stem and two of the inferior leaves were immersed in it. After remaining so for several days, the color of the decoction was distinctly discerned passing along the midrib of each leaf. On the upper side of the leaf, many of the ramifications, going from the midrib toward the circumference, were observed to be tinged with red; but on the under side, there was observed a system of branching vessels, originated in the extremities of the leaf, and carrying not a red, but a pale milky fluid, which, after uniting in two sets one on each side the midrib, descended along with it into the leaf stalk; these were the vessels returning the elaborated sap. The vessels observable on the upper surface Darwin calls arteries, and those on the under surface he calls veins.

To prove the descent of the proper juice, Dr. Hammel stripped sixty trees of their bark in the course of the spring, laying them bare

from the upper extremity of the stem and branches to the root; the experiment proved fatal to them, as they all died in the course of three or four years; but many of them had made new productions both of wood and bark from the buds downward, extending in some cases to the length of a foot, though very few of them had made any new productions from the root upward. Hence it is that the proper juice not only descends from the extremity of the leaf to the extremity of the root, but generates, in its descent, new and additional parts.

Knight detached from the trunks of a number of young crab-trees, a ring of bark half an inch in breadth. The sap rose in them, and the portion of the trunk, above the ring of bark, augmented as in other subjects that were not so treated, while the portion below the ring scarcely augmented at all. The upper lips of the wounds made considerable advances downward, while the lower lips made scarcely any advances upward; but if a bud was protruded under the ring, and the shoot arising from it allowed to remain, then the portion of the trunk below that bud began immediately to augment in size, while the portion between the bud and the incision remained nearly as before. When two circular incisions were made in the trunk so as to leave a ring of bark between them with a leaf growing from it, the portion above the leaf died, while the portion below the leaf lived: and when the upper part of a branch was stripped of its leaves, the branch withered as far as it was stripped, whence it is evident that the sap which has been elaborated in the leaves and converted into proper juice, descends through the channel of the bark, or rather between the bark and alburnum to the extremity of the root, effecting the development of new and additional parts.

Leibig says, "the leaves and other green

parts of a plant absorb carbonic acid, and emit an equal volume of oxygen." They possess this property quite independently of the plant; for if, after being separated from the stem, they are placed in water containing carbonic acid, and exposed in that condition to the sun's light, the carbonic acid is, after a time, found to have disappeared entirely from the water. If the experiment is conducted under a glass receiver filled with water, the oxygen, emitted from the plant, may be collected and examined.—When no more oxygen gas is evolved, it is a sign that all the dissolved carbonic acid is decomposed, but the operation recommences if a new portion of it is added.

The life of plants is closely connected with that of animals, in a most simple manner, and for a wise and sublime purpose.

The presence of a rich and luxuriant vegetation may be conceived without the concurrence of animal life, but the existence of animals is undoubtedly dependent upon the life and development of plants.

Plants not only afford the means of nutrition for the growth and continuance of animal organization, but they likewise furnish that which is essential for the support of the important vital process of respiration; for, besides separating all noxious matters from the atmosphere, they are an inexhaustible source of pure oxygen, which supplies the loss which the air is constantly sustaining. Animals, on the other hand, expire carbon, which plants inspire; and thus the composition of the medium in which both exist, namely, the atmosphere, is maintained constantly unchanged.

The proper, constant, and inexhaustible sources of oxygen gas are the tropics and warm climates, where a sky, seldom clouded, permits the glowing rays of the sun to shine upon an immeasurably luxuriant vegetation. The temperate and cold zones,



where artificial warmth must replace deficient heat of the sun, produce, on the contrary, carbonic acid in superabundance, which is expended in the nutrition of the tropical plants. The same stream of air, which moves by the revolution of the earth from the equator to the poles, brings to us, in its passage from the equator, the oxygen generated there, and carries away the carbonic acid formed during our winter.

The discoveries of Farady prove that oxygen composes one-fifth part of the atmosphere, and is magnetic. The electric theory is therefore supported by this fact, that electricity is always present with oxygen, and as the structure of vegetables and their juices are adapted to act with the greatest efficacy in imbibing the effluvium, so are they also indebted to its influence for their vitality.—Vegetables abound in pointed terminations communicating with juices passing through tubes possessing strong conducting virtues; all of which circumstances must concur in adapting them for imbibing electric effluvium, and diffusing it through their substance.

This is confirmed by applying vegetable points to the cylinder of an electrical machine. The leaves of trees, and even their fine ramifications terminating in buds, and in general all the living pointed extremities and the sharp and serrated edges of vegetation, will be found to possess the same energetic conducting qualities, in proportion to their vigor, and the acuteness of their termination. Even a thorn or thistle will vie with, if not excel, the sharpest needle in this property; and it may be observed, that they are far better fitted to act upon the electricity of the atmosphere, as the *deposition of moisture*, consequent to withdrawing of the effluvium, which holds it in a state of vapor, so far from diminishing their conducting virtue as in the case of metals, is the very principle of their nutrition; so that

there is reason to conclude, that the action of every point furnishes it at once with the means of its vitality, and its growth and maturation.

*A few blades of grass* held toward the knob of a charged jar, the circuit being completed by the human body, will silently, but quickly, effect its discharge without sensibly affecting the human frame.

I have now furnished many interesting facts connected with some of the most important principles of vegetable physiology.

I have stated that the elementary substances of vegetable growth are the gases, oxygen, hydrogen, carbonic acid, nitrogen and ammonia. These by chemical action, through the agency of magnetism, are prepared for absorption or inhalation by the rootlets. That the sap of a plant ascends to the extremity by a set of vessels surrounding the pith, occupying the woody part of the plant, and the ascent is caused by contraction of cells or air vessels acted upon by the electric agency. That certain changes are effected in the ascent of the sap, as it is known that the formation of sugar in maple-trees does not take place in the roots, but in the woody substance of the stem. That the leaves of a plant imbibe carbonic acid gas from the atmosphere, and exhale oxygen. The carbonic gas being elaborated in the leaf, passing through vessels of the under portion, and descending in the vessels of the bark, depositing as it descends to the rootlets the materials necessary in aiding its growth, and discharging at the root any substances unfitted for the use or nourishment of the vegetable. That a large portion of plants are provided with points and conductors for receiving the electric action, and that this is the principle of the vital action, which is constantly furnished in the oxygen of the atmosphere, and constantly present in the earth connected with the rootlets of the plant.

In addition to these sources, all the substances of the earth are charged with it, and a magnetic belt surrounds the globe, its footprints being detected in a zone of mineral and volcanic action around the surface between certain latitudes.

It will thus be perceived that the leaves of a plant perform the office of exhaling and inhaling the gases, and without this, the organization could not be perfect; for it is known that a tree severed from the root will form new leaves and branches without having any connection with the earth, and these will be vigorous for some time if in a situation to receive nourishment from the atmosphere: or if a grape vine be planted outside of a hot-house, and if one portion of the vine is introduced into the warm atmosphere, it will grow vigorously, while another portion of the same plant being exposed to the cold atmosphere will not expand a bud until it receives the genial warmth of the spring.

The question may now be asked, what has all this to do with the pruning of a grape-vine? I answer, that these facts will teach us the value of the leaf in maturing the fruit, and that the proper pruning of a vine will leave as much of the plant above the fruit as the strength of the vine will support. In this climate the vine will not bear as short pruning as it does in the high latitudes of Europe, where the vine is kept low, to enable the fruit to receive the reflected heat from the earth. That is not necessary in this climate, where we ought rather to protect the fruit against the intense action of the sun's rays, and allow the leaves to furnish that protection, while they also furnish the descending nourishment to assist in maturing the grape. The facts mentioned may also assist us in determining the nature of the soil, or manure necessary for the vine; and as potash has been suggested as a beneficial manure, we know that a silurian or

limestone formation, which is naturally deficient in alkali, will be improved by an addition of potash for the cultivation of the grape, and which has been proved by the experiments of the president of the association, in the improved strength and flavor of the wine in a corresponding degree.

G. G.

#### Fertilizers of Plants.

THE chemical changes and substances of which plants consist, are formed out of those in which they live; from the germination of the seed in spring, to the ensuing spring, particularly in perennial plants, may be divided into four periods.

1st. From the sprouting of the seed to the formation of root and leaf. 2d. From the expansion of the first leaves to the period of the flowering. 3d. From the opening of the flower to the ripening of the fruit and seed. 4th. From the ripening of the seed or fruit, till the fall of the leaf and return of spring. On the ripening of the fruit, the duties of annual plants are completed, and they cease to exist, decay, and are converted into fit food for the succeeding generation. Not so with perennial plants.

Before a seed, when placed in the ground, can possibly sprout, it must come in contact with moisture, which contains properties enabling it to perform important offices to the growing seed, and is indispensably necessary to vegetable existence. It possesses a power of rendering matters soluble, a wonderful affinity for solid substances, and an extraordinary affinity for its own elements, which it combines together. It has been known to restore life to snails that have been dried for fourteen years, and animalcules, twenty-six years. When rain falls, it absorbs from the atmosphere and earth, gaseous and other substances, and carries them with it to the roots of plants and recently sown seeds, circulates through them, and thus administers to their growth; without moisture they would remain an indefinite length of time in the soil without motion.—This is the reason why, in our changeable climate, it is dangerous to soak seeds before they are planted, for if moisture does not immediately come in contact with them, they die. I am convinced from experiment, that

immense advantage will accrue to a growing crop, by soaking the seeds and sprinkling upon them their requisite food in the form of powder; but still it is a dangerous experiment, for fear a drought may follow. Water is indispensable in every stage of their growth. Atmospheric warmth is likewise necessary to germination.

The degree required to make seeds grow, varies with the nature of the seed, and the climate in which it is grown. In Russia and Siberia they will spring out of the ground when the temperature ranges above the freezing point  $32^{\circ}$ ; but in our climate they require the warmth of spring. Seeds must contain heat within themselves, to counteract the surrounding cool air. Atmospheric air is indispensable to their growth, as is proved when a farmer buries his seeds below its influence, he finds they do not come up, and he reaps a spare crop; they, however remain unchanged until perhaps a long period elapses, and several different crops have been taken off, when by accidental deep plowing, they are brought to the surface, germinate, and amaze the agriculturist by appearing among a different species; for example, rye among wheat, barley among oats, etc. I was particularly struck with this power of germination possessed by seeds last year, having taken out muck from a swamp that had been for centuries more or less covered by water, at the depth of many feet; perfect seeds of the *persicaria* were found in large quantities, which being thrown upon the surface, immediately grew, and formed plants of great luxuriance. Light is prejudicial to seeds, consequently the necessity of covering them, which is better accomplished by dibbling than by harrowing.

During the germination of seeds, acetic acid (vinegar) and diastase are formed.—This diastase has the property of completely changing starch into gum, and then into sugar. This substance contains nitrogen, and its location is at the base of the germ of the seed, where it transforms the starch into soluble matter, ready to be taken up by the vessels, and conveyed by them to the point of growth; immediately after performing this indispensable office, its functions cease, and it enters itself, with the nourishing ingredients, into the circulation of the plant. Without the aid of this wonderful agent seeds can not grow, because

their starch is insoluble in water, therefore they remain buried in the earth, defying cold and wet, until brought under the influence of air, heat and moisture, when diastase, at the signal of the germ, makes its appearance and produces those surprising transformations which so amaze and delight us in the spring, and cause our thoughts to rise toward the heavens, containing that bountiful God who has stored in our seeds nourishment in so imperishable a form that they are enabled, for thousands of years to lie dormant in the earth, and then spring into existence for our benefit.

The moment a leaf is formed, the plant enters a new existence; it ceases to obtain nourishment from the seed, and commences to draw upon the soil and atmosphere to sustain itself. The stem rises, and the root descends into the earth.

The leaf takes in from the atmosphere a certain quantity of carbonic acid gas while the sun shines, leaves the carbon in the plant, and gives off oxygen. The starch and gum of plants are formed by the union of carbonic oxyd and proportions of hydrogen and oxygen, derived from the water of the sap. Oxalic acid is found in the leaves and stems of many plants; this occurs when the carbonic acid loses one-fourth of its oxygen. Some leaves, rhubarb, beech-trees, etc., are indebted for their sourness to oxalic acid, formed probably by the different degrees of the sun's light. White clover and sorrel grow contiguously, the one sweet and the other sour. I have a plant called *Portulacaria*, which is extremely sour in the morning, without taste at 12 o'clock, and excessively bitter in the evening, caused by the degrees of light. When the flower of the plant opens the petals, it absorbs oxygen night and day, and gives off carbonic acid gas constantly; at the same time, the leaves of the flower emit nitrogen gas. The sap of our sugar-maple tree ceases entirely to be sweet when its flowers come to maturity.—The same thing occurs to a great extent, when the sugar cane blossoms.

The husk of wheat and other cereal grains, is first filled with milk, which becomes sweet, then consolidated into starch and flour.

The fruit in which the seeds of many plants are formed, is at first entirely devoid of taste, then sour, and finally sweet. There

are exceptions, of course, particularly in those which possess citric and other acids, such as the lemon, tamarind, etc. When the fruit is tasteless, it consists of the same substance contained in the leaf, namely, wood fiber, filled with an insipid sap, tinged with coloring matter, at which time it absorbs carbonic acid, and yields oxygen gas. It then becomes very sour, and gives off a much smaller portion of oxygen gas. After reaching a certain stage, the acidity diminishes, sugar is formed, and the fruit ripens. Starch, gum, and sugar, consist of precisely the same elements—oxygen, hydrogen and carbon united in the same proportion. Still these substances are unlike each other in their properties.

Having considered the chemical changes of plants, I will trespass but a few moments longer, to notice the origin of the soil upon which the plants grow. This undoubtedly is produced by the slow decay, debris and crumbling of rocks, that in course of time have been washed by the rains into low grounds and valleys, which they have filled from a few inches to several hundred feet. Then we see that the limestone forms a calcareous soil; the sandstone a sandy soil; the shale, a clay; and a mixture of two debris of these rocks forms different earthy ingredients, or soils; some of these rocks are soft, and readily crumbled, and form soil; while others containing precisely the same compounds, break very slowly. You may always know the character of such rocks, when far from them, by the barrenness of the contiguous country. One rock, when it becomes pulverized, will form a stiff and tenacious clay; another a rich and easily worked loam; and the third a sandy soil or marl. Many rocks contain bones and shells, which of course improve the soils formed from them. If you are geologist enough to know the character of the rock abounding in a particular district, you will know the kind of soil cultivated in that section. P. M. —*N. Y. Farmer's Club.*

#### Organic Elements of Plants.

WHILE contemplating a brief mention of these fundamental parts of vegetable nature, I met the following compilation in the *Artisan*, which is inserted in this place by way

of keeping the gardener and student of vegetable physiology acquainted with the food of plants. Many other elements, chiefly of the mineral class, participate, but in a much smaller degree.

Vegetation is composed principally of the four organic elements, yet the relative proportion in which they occur in plants is by no means uniform. They are all equally indispensable to the growth and development of the system; they are by no means necessary in an equal degree. In most crops, when artificially deprived of their moisture, an analysis of the remaining solid parts ordinarily gives from forty to fifty per cent. of carbon—nearly or quite one-half of the actual weight—while the oxygen constitutes not far from thirty-three per cent., the hydrogen five, and the nitrogen seldom more than two and a half. This is very nearly the relative proportions in which these organic elements exist in most of the farm products applied for the sustenance of animal life. In one thousand parts their proportions are as follows:

	Hay from young clover.	Oats.	Clover seed.	After-math hay.	Peas.	Wheat.	Hay.	Potatoes.
Carbon .....	507	507	494	471	465	455	458	441
Hydrogen .....	66	64	58	56	61	57	50	58
Oxygen .....	389	377	350	349	401	431	387	439
Nitrogen .....	38	22	70	24	42	34	15	12
Ash .....	—	40	28	100	31	23	90	50
	1000	1000	1000	1000	1000	1000	1000	1000

The quantity of water present in most vegetables is generally large. Exposed to a temperature of 230° Fahrenheit, the loss was as follows:

1000 parts of potatoes	lost	722 parts water.
" wheat	"	166 "
" hay	"	158 "
" after-math hay	" 136 to 150	" "
" oats	"	151 "
" clover seed	"	112 "
" peas	"	86 "

So far as regards the form or state of combination in which carbon, hydrogen, and oxygen minister to the growth of plants, I refer the reader to the following extract from a lecture delivered by Professor Johnston upon the subject. He says:

"Neither of these elementary bodies is

likely to enter directly, or in a simple state, into the circulation of plants. The former (carbon) being a solid substance, and insoluble in water, can not obtain admission into the pores of the roots, the only parts of the plants with which, in nature, it can not come in contact. The latter (hydrogen) does not occur either in the atmosphere or in the soil in any appreciable quantity, and hence, in its simple state, forms no part of the food of plants. Oxygen and nitrogen, again, both exist in the atmosphere in the gaseous state, and the former is known to be inhaled, under certain conditions, by the leaves of plants. Nitrogen may also, in like manner, be absorbed by the leaves of living plants; but if so, it is in a quantity so small as to have hitherto escaped detec-

tion. The two latter substances—oxygen and nitrogen—are also slightly soluble in water, and besides being inhaled by the leaves, may occasionally be absorbed in minute quantity along with the water taken in by the roots. But by far the largest proportion of these two elementary bodies, and the whole of the carbon of hydrogen which find their way into the interior of plants, have previously entered into a state of mutual combination, forming what are called distinctive chemical compounds. Before describing the nature and constitution of these compounds, it will be proper to explain, first, the constitution of the atmosphere in which plants live, and, second, the nature of chemical combination and laws by which it is regulated."



## The Garden.

### STRAWBERRY THEORY.

DR. WARDER:—It is a long time since I have dipped my plume into ink or pollen for the amusement or instruction of your readers; think not, however, that the subject has been forgotten, or thrown aside; on the contrary, during the fertile spring and glowing summer, constantly has my foot been arrested when engaged in the graver and weightier matters of the law, and I have turned aside to observe and to investigate the wondrous philosophy, which is, however, but too little understood, as observed in the process of impregnation of plants. The various arrangements of the stamens and pistils, combined and separated, and also in separate plants, excite our surprise, while the wonderful little caskets containing the precious farina are so curi-

ously arranged for the preservation, maturation and dispersion of their treasures as to excite our intense surprise and admiration.

These little particles themselves are well worthy of a critical, microscopical observation. I am reminded of this by the reports in the papers that you and other learned philosophers have detected in what we poor ignoramuses considered a syringing of sulphur, veritable grains of pollen, the origin and source of which has given room for wide conjecture and display of botanical knowledge; and while one contends that it may be from the cypress-tree and the other from the yellow pine, neither of which could have been blooming within a thousand miles of us at the time of that shower, we are left by both to wonder at the astonishing dis-

tance to which this little matter has been transported.

Various interesting trains of reflection might be suggested by the observation of this shower of pollen. May not nature in this way effect some curious crosses or hybrids in the vegetable world? The laws of nature are truly wonderful, whether we contemplate those which regulate what are apparently the greatest subjects or such as govern those which we presume to call the least important.

Nor should we venture to boast of our knowledge of those laws of nature; they are but the more or less imperfect readings of the great book of nature from which we may all soon learn to know our ignorance. Bearing this in mind, let us ever be exceedingly careful that we do not force nature and her laws, so as to make the readings correspond with our own dicta. In my homely lucubrations I have been forced to these conclusions by observing that one of the most successful and intelligent gardeners in the neighborhood of Philadelphia, has recently made a statement before the Pennsylvania Horticultural Society, to the effect that a given variety of strawberry, which in the open ground, and in usual circumstances, is known and admitted to be devoid of perfect anthers, hence called pistillate, and which, without artificial or intermediate (by means of bees and flies) application of the perfect pollen from another plant, would never have been impregnated. With such an one and the variety so well known as Hovey's Seedling, he asserts that the presence or absence of perfect anthers depends entirely upon the rapidity or slowness with which the parts have been developed. He illustrates his case from "repeated observations made in forcing the strawberry;" but we must let Mr. MERRHAN speak for himself. At a recent meeting he presented the following state-

ment, with plants to illustrate his observations.

"I make a few remarks on the sexual characters of the plants of Hovey's Strawberry. I find by repeated observations, made while forcing them, that they become staminate by being forced slowly, in a moderate temperature: at the same time an abundance of light, and a regular supply of moisture—conditions well known as essential to a healthy luxuriousness of the strawberry. On the other hand, I find that whatever tends to check that luxuriance has a tendency to produce the pistillate form. In the specimens before you, one very weak from over watering and deficient drainage, is a pistillate; another, a very weak plant and forced rapidly, has the anthers, very nearly abortive; while the other plants, which have been in the forcing house since the middle of January, and in circumstances every way favorable to their healthy development, are as perfect as possible.

"Last season a number of plants, started in a temperature of 65°, and ripened in one of 75 to 80°, produced all pistillates. Twelve runners from these plants were selected, potted in small pots, and ultimately treated as other plants for forcing. Seven of the strongest of these produced staminate flowers and the other five pistillate, like their parent plants. Another set of 100 pots, last season, produced all pistillates. A similar set, forced easily this season, produced all but the weakest plants, perfect. It has been doubted whether the Alice Mande, in many collections, is correct, and it has been suggested that the growers should observe whether their plants are pistillates or staminates, in order to decide. I have submitted the above observations to you, hoping they may have a practical bearing on that question by showing the distinction between pistillates and staminates to be worthless—cultivation producing either the one or the other."

It is not for an humble individual like your friend "Duster," who has never attempted to force a strawberry in his life, although he has had considerable opportunity of observing the effects of forcing plants into blossom at an unnatural season, and by artificial means—it is not, I say, becoming to enter

the lists against the best gardeners of the age and the first writers, including the profound Dr. Lindley himself, who have previously united in the assertion that these changes may occur and are the result of forcing; but when we see these very men, and among them the originator of the variety in question, himself battling the wall for years, against the theory of a "backwoodsman," on the result of simple observation, and after occupying dubious and different ground, finally adopting our views with the admission that they had been deceived by the intrusion of runners from male plants, we may be allowed to doubt the correctness even of Mr. Meehan's varieties. He, it must be recollected, is at the head of one of the largest private establishments in the United States, with all the varied duties and responsibilities of the entire place, including the lawn, the lake, the forest, the parterre, besides the ceaseless care of conservatory, green-house, hot-house, vineries, fruit-houses and forcing-pits, with all their adjuncts. Of course he must have his aids; nor can it be supposed that he can pay personal attention to every strawberry pot, and it is easy to conceive that, with his many duties and objects of study, he may not be so thoroughly familiar with the slight differences, and marks of varieties as one who devotes special attention to the culture and study of this fruit. In this way I should imagine his varieties have become intermingled.

Taking this distant view of the subject, I should draw a very different conclusion from that of Mr. Meehan, that "the distinction between pistillates and staminate is worthless—cultivation producing either the one or the other," but on the contrary my inference would be that his Alice Maude is similar to one we have had under that name, which bears staminate flowers, and whose leaves so much resemble those of Hovey's Seedling

as to require an accurate observer to distinguish them.

The celebrated Mr. Peabody, of southern strawberry notoriety, and who has the opportunity of watching the fruit for eight months in the year, is a firm advocate of the pistillate theory, and believes that "the runners always produce the like of the parent stock, no matter by what kinds surrounded." Mr. Huntsman, a very intelligent observer in Long Island, and many others of the most intelligent cultivators have adopted the same views.

I had hoped this vexed strawberry question had long since been put to rest, at least among the practical men of the age.

DUSTER.

#### Flowers for the Farmers.

SHOULD the farmer cultivate flowers? Most certainly: why not? He toils to combine from the generous soil and lucid atmosphere, the elementary principles, by whose union he may, in harvest time, garner for you the finest wheat, the savory herb, or temptingly delicious fruit. He studies to rear for your profit and fancy the productive cow, the symmetrical ox, and the noble steed. He clothes your landscape with its verdant velvet green, and refreshes you with his ornamental shades; and why should not his heart be softened, and his sun-burnt brow be wreathed with conscious manliness and expressive joy, by the beautiful flower which springs up as if to kiss his toiling hand, for kindly care and aid to give it place and food.

The farmer may have his flowers, and he ought to have them. He should not be that rough, forbidding, cheerless object, he may sometimes seem to indicate, beneath his dust-soiled and often tattered garment. He should be a noble specimen of benevolent kindness and frank simplicity. We trust he will be, when he takes his proper rank in society. His calling tends to the development of such a character.

Do you say he has no time to cultivate flowers? Let him try. The very effort to mature a beautiful though transient flower will, doubtless, have impressed a practical lesson of great utility upon his mind. If he

can raise a delicate flower, he can raise a bushel of wheat or a delicious pear. His skill acquired in perfecting the flower, will be capital secured to aid him in the product of the grain or the fruit. But better still, he is morally benefited. His love of the soft and beautiful is strengthened, he is more susceptible of kindly feelings and cheerful contentment. Thus he is elevated, polished, and society is blessed in his improvement.

Do the savage or barbarous tribes cultivate flowers? The half-civilized may attempt it, but it is the enlightened and Christianized nation that perfects their beauty. In this respect, and in their happy social influence, cultivated flowers and cultivated music are twin sisters.

We speak from experience and observation. A few years since, we visited Mount Auburn Cemetery, when its flowers were in their freshest bloom. We felt their power upon all our moral nature. We resolved that our humble home should have its flowers. Our efforts have been more than repaid in the results of our labor. The delightful patch of flowers! What a harvest of smiling joys. How oft the passer by has shown by his cheerful looks his interested approval. So, too, at the close of day, when weary with toil and worn with care, we have bent our steps homeward, how have their delicate and varied charms revived our drooping spirits and dissipated half the gathering pains that were settling down upon our languid frame.

Let none imagine that flowers are superfluous. They certainly are not. Who made them, and arrayed them so superior to "Solomon in all his glory?" Our wise and benevolent Creator.—We wish you many a beautiful "bouquet" the coming season.—*Granite Farmer.* W. D. L.

#### Green-house Sponging.

VERY few persons appear to know the value of sponge in a green-house—I mean for the purpose of washing the leaves of all those plants with leaves broad enough to admit of it. I took the hint five years ago from a neighbor, the most successful plant-grower I have had the good fortune to know. His plants were always so especially fresh and healthy that I was for a long time puzzled to understand his secret; and he always

declared he had no secret. But early one morning, I caught him with a pail of clean water, slightly warm, by his side, sponging the leaves of all his choice plants. I said to myself, "I have it." I did more, I went home and practiced it. My plants soon showed, by aspect, that I was not wrong in believing it to be the real secret of my neighbor's success.—*Horticulturist.*

#### Fortune's Double Yellow, or Wang-jang-ve Rose.

We take the following from the *Floricul-tural Cabinet*, in which is given a colored engraving of a group of three of the Double Yellow Roses. The largest, apparently in full bloom, is three and a half inches in diameter, and is full of well developed and showy petals. The leaves of the bush plant are small, only about an inch long and half an inch wide. We hope the day will soon come when the public will enable us to get up similar colored engravings to ornament our journals, and give them an accurate idea at once of whatever is new and beautiful.

The Horticultural Society sent Mr. Fortune to China to collect plants, and along with other valuable ones he forwarded to the Society's garden, in 1845, was the highly ornamental Climbing Rose. From the remarks that he communicated about the Rose, great expectations were entertained of its beauty, etc. Its subsequent culture, however, in our own country, in various places, proved very different; but few blossoms were produced, and those of inferior size. In consequence of such failures, after what had been described of its excellencies by Mr. Fortune, a considerable prejudice against the Rose has arisen. This has resulted, however, from the improper treatment which has been pursued with the plant. Our readers will recollect that the treatment in pruning the Banksian Roses, is very different to that applied to the general roses of our gardens; the former requires a summer dressing and pruning, but the latter require it in winter. Fortune's Yellow Rose must be treated similar to the Banksian, but the treatment usually given to the other class of roses mentioned had been pursued with it; hence the failure and disappointment resulting. The Banksian Rose does not produce its flowers on the wood of the present year's



growth, as other roses do, but on the wood of the previous year; therefore the great object must be to obtain strong well-ripened wood of this season to supply the bloom of next year. The principal attention to effect this is to treat the rose very similar to what is practiced with the peach-tree, as it regards its summer regulation of new shoots, by thinning away the superfluous shoots, retaining only those which have bloom upon them, and a due proportion being left for the following year's bloom. Toward the end of April hand-dress the rose-tree, when the shoots will be about four inches long.—Again, in July or early part of August, look over the rose, and stop the leads by cutting away one-third of each; and not to have the plant crowded, cut some clean away, or so as only to leave about three inches to form spurs of bloom. The wood now left, being kept entirely open, will have a proper chance of ripening by the end of summer. The shoots will require to be duly secured to the wall or trellis. If this attention to its pruning in summer be duly observed, it requires no other pruning during winter, and constant and profuse bloom may be secured every year. We have adopted the plan for several years with the greatest success, the white and yellow blooming most profusely.

Now, this method of treatment must be pursued with the rose we figure, under precisely similar circumstances, and, as we saw in the nursery of Messrs. Standish and Noble, of Bagshot, during the past summer, where plants of it were in most profuse bloom, it will prove to be exceedingly beautiful and ornamental. It is a rapid grower, and quite hardy, excellent for covering a wall or trellis, or grows as a pillar rose.

The following account of the Rose is given in the *Journal of the Horticultural Society*, vol. vi, p. 52, 1851, by Dr. Lindley: "Mr. Fortune tells us, 'The Rose you inquire about is well known to me, and was discovered in the garden of a rich mandarin at Ningpo. It completely covered an old wall in the garden, and was in full bloom at the time of my visit; masses of glowing yellowish and salmon colored flowers, hung down in the greatest profusion, and produced a most striking effect. It is called by the Chinese the Wang-jang-ve, or Yellow Rose. They vary, however, a good deal in color; a circumstance which, in my

opinion, adds not a little to the beauty and character of the plant. I fancy it is quite distinct from any other known variety, and certainly different from any China kind. It is admirably adapted for covering walls; and if planted in rich soil, and allowed to grow its full size, nothing can produce a finer effect in our gardens.'"

Had Mr. Fortune's directions as to its being allowed to grow without having its shoots shortened been followed, we should have had his fine Rose some years ago flourishing as it now does at Bagshot with Messrs. Standish and Noble. To see it thus, however, we must be content to wait till "gentle spring" and "refulgent summer" arrive.

"Come, gentle spring, ethereal mildness, come,  
And from the bosom of yon dripping cloud,  
While music wakes around, val'd in a shower  
Of shadowing roses, on our plain descend."

#### City Gardens.

An enthusiastic writer, "Horticola," has lately given the readers of the *New York Agriculturist* some valuable remarks respecting city gardens—a province which might be enameled with flowers, but which is, alas, too often a staring wilderness. A portion of the article referred to is gladly transcribed, in the hope that it may act as an incentive to the occupants of city grounds, to make renewed exertions in their behalf.

The original paper is accompanied with a plat of the proposed subdivision and occupancy of this ground, with vegetables, fruits, and flowers, which it appears to me, is attempting entirely too much for our small city lots; otherwise his directions and suggestions are admirable. In my own opinion, especially with a family of children and a weekly laundry on hand, the best possible city garden within the narrow and high inclosures by which they are unfortunately too often surrounded, is a well laid pavement of bricks. Think me not barbarous, and if you be so fortunate as to have a ray of sunshine, endeavor by all means to induce a rose, a vine, or any shrub to become a part-

ner of your confinement, to share as did the lovely "Picciola" the loneliness of the prisoner. If you still have hope, and are blessed with a little more space, assuredly provide a narrow border around the inclosure, where even old Sol may cast his rays, be it but for an hour at a time; in this way you may hope to encourage many gentle beauties of the spring and summer.

No matter how small the surface be which is to be cultivated, either in shrubs, plants, or grass, bear in mind especially the subjoined direction as to the thorough preparation.

One of the best crops, and productive of the richest returns with the least annoyance, is a central grass plat, around which a paved walk will enable the children and domestics to pass without too much restraint.

If you belong to the happy few who can control more space and sunshine, provide a garden by all means, in which be sure to reserve a corner for the children to dig. This contact with mother earth will do them good. Here they may plant their beans today and dig them up tomorrow, to watch the progress of vegetation. It must be recollected, I am thinking of the thousands who live in tall houses on narrow lots in our crowded cities, and for whom I again urge the superiority of window gardens and a dependence both indoors and out, upon the markets for their supplies of blooming plants.

According to Loudon, Downing, and other authors on landscape gardening, we understand by small gardens, those of from one to five and ten acres in extent; but the one I am about form, dig and plant, scarcely exceeds so many rods, being only about twenty-five feet by sixty, this being the most that can be spared for garden ground out of a common sized city lot, twenty-five by one hundred.

This is certainly a very small garden, and for that reason the owner ought to know how to lay it out and crop it to the best advantage.

In this city and its outskirts, we daily see very neat and respectable houses going up. The architectural beauty of many of them, the owners need not be ashamed of, but the garden—where is it? Alas! "echo answers, where?" Come with me to the rear of the house and I will show you the place where the proprietor intended it to be:—ay, here it is, with a heap of coal ashes in one corner, old broken crockery ware, corn cobs and cabbage leaves in another; and to add effect to the miniature landscape, a lake in the center, in the shape of a mud hole, where the ducks perform their ablutions on rainy days and the children sail their ships. Here also is the leafless stump of a peach or cherry tree, as dead as the label attached to it; and which were bought (tree and label,) *cheap*, in Fulton Market after being well dried and seasoned there for two or three weeks. Such a garden as this, attached to a neat, genteel well built house, appears as unsightly and incongruous to me as a man clean shaved, with a new suit of clothes on, but with the crown out of his hat, or his toes through his boots.

This neglect of gardens originates from two or more causes, such as the following: want of taste, lack of knowledge how to form a garden, time and means; very frequently the latter is the principal cause of this neglect, as the last cent is expended on the house alone, and the garden has to take its chance. How different the taste and views of such persons, to those of one of the old pastoral poets, Cowley or Shenstone, (the latter I believe,) who said, "Give me a small house and a large garden."

But to the point:—How to make the garden. We will suppose it inclosed with a board fence six feet high, the ground covered, or partially covered with sod. Where the walks are to be, and round the house, pare the sod off about an inch in thickness, the width of a spade or more, and twelve or eighteen inches in length, cast it out of your way, not to rot, but to keep fresh to lay down again by and by for the lady of the house to bleach the linen on. Now commence at one end of the lot and dig out a trench, two feet in width and eighteen inches deep, or more if the soil is rich and deep; remove this to the other end of the garden to fill up with when you come to it. Now dig the top sod or soil and throw it in the

bottom of the trench, and bring the bottom soil to the top, loosening the bottom of the trench well, and picking the stones out and throwing them on one side as you proceed. If the ground is uneven, it must now be leveled, removing some from the elevated part, and adding it to the other, to keep at least eighteen inches of good soil all through. But before any further progress is effected an important inquiry must be made. Does the ground require draining? If it does, now is the proper time to drain it; as it will be in vain to look for fine crops of fruit, vegetables or flowers, on a sour, wet, retentive soil. This is of fundamental importance both to house and garden, therefore it must not be neglected, as it can be done with less trouble and expense before the garden is made than afterward.

The draining, trenching, and leveling being done, the next point in order is the formation of the walks; these must be carried round the garden three feet from the fence, and be two feet six inches wide, with one cross walk in the center three feet wide. The soil must be dug out to a little less than the proper width of the walks and to the depth it was trenched, and scattered over the ground on each side; all the stones that were thrown aside when trenching must be collected together to fill up with, keeping the large ones at the bottom. But as it is intended to edge these walks with box, it must be done before the walks can be finished. There will be about three hundred feet altogether to be planted with box or other edging, requiring about thirty-three yards, which can be had at any of the nurseries for twenty-five cents per yard. Before proceeding further, I would remark that the cheapest and best way would be to engage a man to trench the ground, make the walks and plant the boxwood, who understands it. By paying a competent person only fifty cents per day more than you would a laborer, you would have your work done properly and in half the time.

The planting of the box edging being completed, the walks can now be finished. Cover the large stones with smaller ones, and over that coal-ashes or coarse gravel, finishing off with fine sharp gravel to within two inches of the top of the box, beating it firmly down with a rammer or the back of the spade.

#### Forcing the Tomato.

Among the catalogue of vegetables that may be had during winter, allow me to call your attention to that desirable edible, the *Tomato*. This essential may be furnished fresh the whole year round if desired; and it appears feasible that it might be made to pay by the market gardener, as no doubt a good price would be realized during the time they are not to be had out of doors. So far as I have proved, which is from the experience of two years' successful cultivation of it under glass, there is no similar vegetable more easy to manage. If the following remarks are of use, they are at your service.

In the first place, solar influence is a main requisite. Without this the plants do not elaborate the sap, so as to produce blossoms sufficiently strong to set the fruit; consequently, a free exposure to the sun's rays is absolutely required. A low, close, and light pit is perhaps the best structure that can be had, which might be applied to many other useful purposes, as propagating, growing flowers, etc. A close vinery, not at work at the season when wanted for this purpose, would answer quite as well; and as the tomato would not require a greater temperature during the night than 55 degrees, there would be no obstacle to accommodating the grape-vines during their bursting, after which the tomatoes could be removed, if found to be troublesome. On the side of a bank, facing the south, a cheap and efficient substitute might be formed, by leveling down, so as to give a flat base, with common garden frame lights, reared close together, and supported by rough spars, fixed sloping from the upper to the lower base, and a common flue conducted through from end to end. This kind might answer the purpose of the market gardener, or persons of limited means, and I am convinced that, under such circumstances, it would pay for fuel, attention, etc., and leave a profit; for, as far as I have proved, the tomato will fruit freely under glass, if fully exposed to the sun.

The following is the practice adopted at this place: The seed is sowed about the beginning of August, and when the plants are large enough, they are planted out singly, about three feet apart, in a bed of good, but not rich earth, two feet wide by one foot

deep, and placed along side the inside front of the house, the upper surface being about eighteen inches from the glass, and a drainage of rough stones laid underneath the whole. The sashes are left off until cold nights begin to occur. As the plants progress in growth, the weakest branches are thinned out, the best tied up under the roof, and about eight inches from it, in a similar manner but not with the same regularity as is usual with the grape-vine.

There are, from time to time, more branches produced than are necessary, which would cause too much shade. The weakest should be removed occasionally, and likewise any decaying foliage. As the blossoms continue to expand, a little assistance is useful in helping impregnation, which may be done by giving a sudden but light jerk to the branches; this will burst the anthers, and liberate the fertilizing pollen. At all favorable opportunities, admit air from above, but avoid cold currents, which produce the growth of a black fungus, that, if not checked, will as speedily cover the leaves as the mildew does those of the grape-vine. If such should make an attack, a little more fire heat, with a small portion of sulphur sprinkled on the coolest end of the flue, where it will not ignite, will soon put the pest to rout. 55 degrees is a suitable temperature through the night, and with sunlight from 75 to 86 degrees, always remembering to admit air when favorable, but avoid biting winds. The bed will occasionally require a supply of water, and the atmosphere should be kept somewhat damp, but by no means saturated. Syringing overhead has a tendency to accelerate the growth of the mildew, and ought not to be done unless in continued dry and sunny weather, which does not often occur in the winter time.

I have never yet been troubled with insects in forcing on this plan; but if the red spider should make its appearance, the sulphur applied as above will stop it. Fumigating with tobacco well, has destroyed the Aphis, or green fly, and an occasional syringing with a weak solution of whale oil soap, will dispute the interference of any other kinds, which, by the way, there is no occasion for, until the enemy makes its appearance. The above treatment has so far succeeded with one, and no doubt will do so with others, if

tried. No plant requires less skill in forcing, and none will give greater satisfaction, where fresh and delicate vegetables during the winter are valued.

WM. CHORLTON,  
Gardener to J. C. Green, Esq., N. Brighton, Staten Isl.  
—*New York Agricultor.*

#### General Principles of Forcing.

It may seem strange to those unacquainted with forcing matters, to think of taking at one swoop, vines, peaches, and other forcing fruits, and dealing out advice applicable to them all. Yet a little generalizing is not amiss now and then, for it will assist the novice in so grouping his matters as to economize in regard of both fuel and labor, as well as to fix in his mind, in distinct characters, the necessity of observing certain laws, which at all times affect the well being of fruits under the forcing process.

Now, the great principles which, under trifling modifications, concern all forcing, are the following:—Light, Heat, Atmospheric Moisture, and Ventilation. These are placed purposely in a just sequence, according to our ideas; for a due amount of light justifies the application of heat in the forcing sense of that term; this done, a necessity arises for a given amount of atmospheric moisture; and as this kind of artificial excitement continues, a slight contamination or vitiation of the inclosed air of the forcing-house takes place; hence the necessity for ventilation, which, in the main, may be said to be caused by heat, and this brings all the rest into action. This is manifest from the fact that cold frames, or pits, in winter, if dry, may remain closed for days without injury.

*Light*, then, would appear to be the chief mover of the whole affair, as concerns the forcing gardener; and we will point to its bearing in practice. To light it is we owe, in the main, the necessary solidification, or ripening, of the parts of our plants or trees; in other words, the maturing of their structure; also, the digestion of the sap; and, lastly, the coloring matter is almost entirely dependent on the light, as witness the process of blanching, which takes place in our sea-kale, mushrooms, asparagus, etc., when purposely deprived of light. If this, then, be the prime moving power of the forcer's

machinery, how essential it is that the gardening student's mind should be duly impressed with its importance in the very outset of his practice. It may here very naturally be asked, what is to be done practically, since we can not make light? True enough, indeed, or man would soon disturb the order of the seasons. But some things the forcer *can do*: in the first place, secure clean glass to his structures; in the second, objects requiring a great amount of light placed very near the glass; and thirdly, a negative bearing of the subject—he can reduce the stimulus of heat in the comparative absence of light. Added to this, he can, by training and thinning processes, so arrange that the leaves retained may receive the full influence of the light.

And now for *Heat*: for without this, in a certain ratio, all the light imaginable would be inadequate to the purposes of vegetation. Of course, this is a matter of degree; we speak of it here in reference to its power of exciting vegetation; and in order to accomplish this, it must, in the main, be above the freezing point, even with respect to plants from our coldest mountains. As to the forcing gardener's subjects, there are few that will be excited by warmth in any very sensible degree, until the thermometer has attained the point known as "temperate," or 55°. However, the application and increase of heat practically requires much consideration. To theorize on heat is not enough; a man should be thoroughly conversant with the habits of his subject in their native conditions; this, added to a scientific consideration of the properties of heat, constitutes any man a first-rate forcer, provided he has the proper means to carry out his views. This be the maxim, then, with young forcers: in no case use extra appliances of heat irrespective of the amount of light. As for night heats in our forcing houses, we are persuaded that a diminished amount, generally speaking, would be beneficial.

Orchids are said to be tender things. We have a house containing both eastern and western genera, the temperature by night of which, for the last three weeks, has not averaged above 50°, and yet the plants look hearty, or rather robust. But they have had a roof-covering nightly, and thus very slow firing sufficed. This question of roof-covering has a kindred bearing on this portion of

our remarks; we have little doubt that the time will arrive when they will, on all sides, be deemed a necessary appendage of glazed structures; indeed, their utility is already recognized by most of our first-rate gardeners, and the only thing that remains is to provide a material of general application.

*Atmospheric Moisture* is our next consideration; and the very mention of this brings to our mind the mummy plants of our childhood, when crowded shelves of half-dried specimen plants might be seen in first-rate establishments, the red spider, mealy bug, etc., rejoicing in a congenial element, and, doubtless, marveling to find that though foreigners, far from their native home, man should provide with kind sympathy for their sustenance and preservation. In those fine old days there were none of your gimcrack dished tiles, flanged-pipes, and evaporating-pans; these are all innovations; floors were white, walls were dry, and not a dew-drop or a pearly spangle to be seen!—The hot-house would have made a capital bedroom; however, the spiders and the bugs have the worst of it now, scarcely a soul can be found to patronize them.

Joking aside, these were serious matters; humanity is a fine thing, and so is sympathy; but in these days it begins at home.—How they managed in those days to please the cook and the table-decker, it is now difficult to imagine. But how altered!—Now, where is the hot-house of any repute that has a heating apparatus without a provision for atmospheric moisture? To come, however, to principles—without the due amount of this necessary element, the tax on the foliage of plants in the form of perspiration, is too great at times to enable the plant, or tree, to present that degree of vigor which is at once the testimony of robust health, and the precursor of fruit and flowers.

If any one can not comprehend this, let him read of the parched wilds of Africa; or, indeed, come nearer home, and inquire why Britain boasts so of her green fields and lawns, as compared with some of her continental neighbors. A too high degree of evaporation, without a corresponding degree of absorption by the foliage, necessarily tends to that condition, which may be termed, in a mild way, leanness; and, however it happen, it is the very condition to prepare

for the various insects which are the pests of vegetation, whether fruits or flowers.

Every structure, therefore, of whatever character, appointed to gardening matters, should possess a special arrangement for the production of atmospheric moisture: we would scarcely except our succulent tribes. Let it not be understood, however, that we would have our readers forever tampering with damp atmospheres; while we thus write, we must deprecate any rule without a principle. Even with the orchideous tribes, which revel in a warm and moist air, there are periods when even an almost dry atmosphere is beneficial for a few hours.

After all this sifting of principles, let us take a little fresh air; let us think about *ventilation*—that principle so averse to what the gardener terms "drawing;" for a drawn or over-lengthened plant is a sure evidence of mismanagement—of a debilitated constitution.

We remember well the time when men of scientific attainments fancied that practical men were altogether wrong about this giving of air, ventilation, or whatever else folks call it. But they were wrong; the practical men had, no doubt, been occasionally guilty of a sort of mannerism; but from this even, what class of society is totally exempt? It assuredly is not worth while to open the sashes of a green-house to a tempest, or to what country folks call a thin wind; but these are merely extravagancies. We say, endeavor to obtain a circulation in the confined, and by consequence, stagnant air of your garden structures; if you *must err*, let it be on the right side of nature. The great and marvelous world which we at present inhabit has, thanks to God, neither roof nor sides like a hot-house; and though the poor, untaught heathen may fancy a boundary in the ethereal blue overhead, we are sure that such bears the stamp of infinity.

After all this, let us caution our readers against the abuse of this principle. Giving air, and giving artificial heat, are each matters to be continually modified by existing circumstances; and such things make the life of the gardener one of continual watchfulness. It has been said that you can tell a gardener—a genuine "early York"—a mile off; so be it; so you can a ship captain, a lawyer, a chimney-sweep, and some other grades of society.

Our early cucumber man would, if he grow little else, doubtless speedily condemn us as horticultural latitudinarians. What! he may say, let a north-easter blow on the first ridged plants in the end of February? We say no, by no means; we are aware that such a free advocacy of ventilation may indeed subject us to a little prejudice. This should not be.

To sum up the matter; light, heat, atmospheric moisture, and ventilation, are all powerful means to either good or bad ends in the hands of the cultivator. If he make an indiscreet use of them, that is, uses them irrespective of outward conditions, the fault is not ours. Here is the Scylla, there Charybdis; pray do not run your vessel against either.—*R. Errington, in Cottage Gardener.*

#### Potatoes—Seed and Seedlings.

DR. WARDER:—Thanks to you, sir, for the kind and favorable notice you have taken of my poor efforts in the improvement of the potato. Should time and a more extended and varied set of experiments disprove that portion of my theory to which you take exception, I hope I shall have the humility to acknowledge it. Our business is to *interpret* nature, and not to make laws for her. This interpretation is not the work of one, but of all; and of all time. "Truth is the daughter of time," says a German author.

I send you herewith, some seeds of the potato, (see No. 4 of my advertisement.) The white paper has one thousand seeds borne by one of my best sorts of 1849, and produces tubers represented by one of the families of the seedlings of 1852.

The four red papers, each having one hundred seeds, are from that incomparable variety, the Rough Purple Chili. According to the experience of last year, the white paper will produce two hundred and fifty plants, and the red ones about three hundred and fifty, as almost every seed of it seemed to vegetate. Should you, or some kind friend of yours, take charge of this seed

you would not, probably, need to save it in a hotbed. Mark carefully what I say, in my printed directions, about protecting the young plants from the hot sun. As your climate is hotter than this, I would suggest the wisdom, probably, of finding a position for the plants, (which you will need to transfer from the beds about the first of June,) on the north side of the hill. Should you not be able to take care of all these seeds, I hope you will, at least of the red papers. The varieties produced from them are not of as fine *shapes* nor *external color*, but in *flesh* and *hardiness* are superior. When I dug my seedlings last fall, I saved, (according to my seventh printed rule,) 952 varieties out of 1450 plants, from the White papers, and 454 varieties out of 788 plants from the seed in the red paper. Many rejected sorts of the last were large, hardy and elegant in flesh, and were rejected simply on account of bad shapes.

I have sent papers of these various seeds to the corresponding secretaries of all the Northern states except Indiana, Iowa and New Hampshire. I, at the same time, made offers to them of small parcels of tubers for trial. Massachusetts, Ohio, Michigan, Illinois and Wisconsin have replied, and have been supplied. Others will probably also respond favorably.

This is quite an enterprise for one so feeble in health and poor in purse, and should my theories and remedies fail, I shall fall pretty flat. But I hope to benefit my country. The varieties raised from my seeds will, it is probable, fit the several climates better than the tubers which I send.

Perhaps I should ask pardon for occupying your time so much with another's matters; and yet, perhaps, you will feel some little interest in it. Wishing you much success in your editorial enterprise, yours, etc.,

CHAUNCEY E. GOODRICH.

P.S. I have just weighed twelve tubers, seedlings of 1852, derived from seeds like those in the white paper. They were taken from the top of a cask, and almost at a venture. The weight was almost  $5\frac{1}{2}$  pounds, or 7 ounces each.

UTICA, April 2, 1853.

Mr. Goodrich has furnished me the following rules for cultivating them. His extended experience entitles him to confidence from all who are willing to unite in the experiment.

1. Soak the seeds in lukewarm water six or eight hours, then mix them with sand or fine earth to give them body, so that they may be sown thinly and evenly. Sow in as clean ground as possible, or you will lose them in weeding. Cover lightly and press the earth upon the seeds, marking the exact place of the rows very accurately. Potato seed, if well saved, is very sure, but slow in sprouting. They will be fit to weed, the first time, in from three to four weeks. Sow different sorts separately. Give the whole ground of your bed to them.

2. Sow, in central New York, the middle of April; but earlier further south. Transplant in six weeks. The plants are as hardy as tomatoes, and may be transplanted similarly, taking earth up with them, when you can, and having first hardened them to the air before removal. Shield them from the hot sun with any large leaves or shingles, until they get rooted. Transplant into a fair soil, but not a rich one, as moderate growth is stronger than a rapid one. Use a handful of rich compost about the young plant to give it a start.

3. If sown in central New York, use a moderate hotbed, or sow as late as May 10th in a cold bed under glass. Farther south, sow out of doors as you would cabbage. If you sow under glass, be sure to shade from the hot sun, in the middle of

the day. Do this with straw sprinkled lightly over the glass, or with narrow boards. Begin before the seeds are up, and continue as long as they are in close beds. Out of doors this is not usually needful. Few plants suffer so much from hot sun as young potatoes.

4. In transplanting, prepare your ground by deep plowing. Lay off your furrows three feet apart. If possible run a small subsoil plow through the bottom of your furrow, to give depth to your culture. Place your plants two feet apart in the row, and but one plant in a place. Do not use poor plants if you have a tolerable supply. Set your plants a little deeper than they grew.

5. As soon as they take root, hoe, and hoe and plow frequently, until they are in flower, after which do nothing more than superficially hoe up the weeds. I advise not to hill potatoes in dry ground.

6. Dig early; it may not be quite so early as you do common field crops, but before they are injured by wet, dark and damp weather. Remember that a seedling potato, the first year, sets and matures its tubers mostly after regular field crops have got their growth. Seedlings dug somewhat early will not be so large, but they will be much more healthful than when dug later. Late dug seedlings are often a little diseased, not from constitutional weakness, but by a law applicable to all tropics when grown in unpropitious weather.

7. In the fall, dig each hill alone. Having dug a plot, go over it once and again, most deliberately, throwing out every hill that seems *weak, ill-shaped, yellow-fleshed, or spreads widely in the ground, or is small and immature*. A seedling well cultivated the first year, and yet making small tubers, will never afterward ripen in season.

8. Save each hill separately, that is, put such good hills as can readily be separated,

together, to the amount of three or four. Put these separate parcels in dry sand in a barrel, putting strips of shingle between the parcels. In this way store the whole. Throw away the small tubers of even your good hills; they would be more trouble than profit.

9. Some of your good sorts will be tolerably eatable when two seasons old, others will require three or four years growth, just as in the case of many fruits.

10. Good seed yields a very variable proportion of plants. In my experience it has varied from one-fifth to four-fifths of the seed sowed.

11. Potatoes cultivated in this manner will mostly gain an eatable size the first year.

#### Cut-Worms.

NUMEROUS complaints have been made of the ravages of cut-worms among corn, wheat, grass and other vegetables, in various parts of the country. After a tiresome search through many of our agricultural publications, I have become convinced that these insects and their history are not yet known to some of the very persons who are said to have suffered from their depredations. Various cut-worms, or more properly subterranean caterpillars, wire-worms, or *Juli*, and grub worms, or the young of May-beetles, are often confounded together or mistaken for each other; sometimes their names are interchanged, and sometimes the same name is given to each and all these different animals. Hence the remedies that are successful in some instances, are entirely useless in others. The name of cut-worm seems originally to have been given to certain caterpillars that live in the ground, about the roots of plants, but come up in the night and cut off and devour the tender stems and lower leaves of young cabbages, beans, corn, and other herbaceous plants. These subterranean caterpillars are finally transformed to moths, belonging to a group which may be called agrotideans, (agrotididæ,) from a word signifying rustic, or belonging to the fields. Some of these rustic moths fly by



day, and may be found in the fields, especially in the autumn, sucking the honey of flowers; others are on the wing only at night, and during the day lie concealed in chinks of walls and other dark places. Most of these moths come forth in July and August, and soon afterward lay their eggs in the ground, in plowed fields, gardens and meadows. In Europe it is found that the eggs are hatched early in the autumn, at which time the little subterranean caterpillars live chiefly on the roots and tender sprouts of herbaceous plants. On the approach of winter they descend deeper into the ground, and curling themselves up, remain in a torpid state till the following spring.

*Remedy.*—Fall plowing of sward lands which are intended to be sown with wheat or planted with corn, the following, will turn up and expose the insects to the inclemency of winter, whereby many of them will be killed, and will also bring them within reach of insect-eating birds. The only effectual remedy at present known, has been humorously described by Mr. Asahel Foote, in the *Albany Cultivator*, and reprinted in the *New England Farmer*. After having lost more than a tenth of his corn he "ordered his men to prepare for war—to sharpen their finger ends, and set at once about exhuming the marauders. For several days it seemed as if a whole procession came to each one's funeral, but at length victory wreathed the brow of perseverance; and the precaution having been taken to replace each foe dislodged with a suitable quantity of good seed corn, he soon had the pleasure to see his field restored in a good measure to its original order and beauty."

Mr. Deane states that he once prevented the depredations of cut-worms in his garden by manuring the soil with sea-mud. The plants there generally escaped, while every one was cut off in a spot of ground contiguous. [Was it the salt that did this?—Meigs.] Mr. Peterson, of Stockport, Pennsylvania, protected his cabbage plants from cut-worms by wrapping a walnut or hickory leaf around the stem, between the roots and leaves, before planting it in the ground. The late Hon. Oliver Fiske, of Worcester, Mass., says, that "to search out the spoiler and kill him, is the very best course; but as his existence is not known, except by his

ravages, I make a fortress for my cabbage plants with paper, winding it conically and firmly above the roots and securing it by a low embankment of earth."—*New York Farmer's Club*.

*REMARKS.*—The hickory leaf and the paper, recommended at the Farmer's Club, I have tried with good success. The digging or plowing of the ground and exposing it in winter may enable the birds to pick up some insects, but the tough coat and low vitality of this worm cause it to escape injury from frost. I apprehend few die from this cause. But they may be starved by this process, as they are thus deprived of their necessary nourishment. Of this any one may satisfy himself by examining beneath a dock early in the spring, where he will find a great many of the "reptiles." Here too is an additional argument in favor of winter plowing or digging, and the extirpation of those miserable weeds which some of us have been fighting all our lives.—Ed.

#### Fertility of Nile Mud.

THE celebrated microscopic philosopher, Ehrenberg, has examined this mud, and finds its great fertility to be owing, not so much to any peculiar mineral contribution, or to the presence of vegetable matter, as it is to the vast accumulation of extremely minute forms of microscopic animals, which by their decomposition enrich the soil.—*New York Farmer's Club*.

#### Cold Frame vs. Hotbeds.

PROFESSOR MAPES said that his experience had learned him that a very great superiority is found in the cold frame over the hotbed, for cabbage plants. He sows the seeds in last of August or in September, and before frost sets in, he pricks them into his cold frames, quite near each other, say about two inches; the frame is made of common boards, with a top formed by cutting grooved boards in two, driving the tongues and grooves together, then put battens on each end. These pieces are laid on the frame, battened side down, so that rain runs clear

off. In the winter he occasionally lifts these covers to let in air and light, but for the most part leaves them on during all the hard frosts. The plants in the frames are of course frozen hard, but when spring arrives they start strong and become very early, vigorous plants, so that his neighbors come to him for them, and pay a price many times greater than for hotbed plants. The soil

in the frames is of course good, but he adds nothing more than to the rest of his soil.—Cobbett used to sow his cabbage seed in the fall, but he did not much benefit in it. The quiet protected plant in the cold frame, I find best. But if the season should be such as to freeze and thaw several times, they suffer. He never covers the frames except with the boards.—*N. Y. Farmers' Club.*



## Pomology.

### SOUTHERN APPLES.

REPORT ON SOUTHERN FRUIT EXHIBITED AT THE LATE FAIR IN MACON, GEORGIA.

*To the Executive Committee of the Southern Central Agricultural Society.*

GENTLEMEN:—Your committee to whom was confided the duty of examining and classifying the Fruits exhibited at the State Fair of October, 1852, respectfully report that they have discharged the duty assigned them in as perfect a manner as the nature of the duty will admit, conscious at the same time that it is imperfect and defective, and hoping that a faithful prosecution of the subject, from year to year, will remedy these defects in a great measure.

The operations of your committee have been confined exclusively to the examination of apples, as from the period of the year at which the exhibition took place, most species of fruits were necessarily out of season, and consequently very few were presented. The variety of Southern seedling apples was large, numbering some sixty kinds, some of which have been produced by enterprising individuals, and many very valuable specimens supposed to have originated with the Cherokee Indians, who knew no other means

of propagating fruit than by planting the seeds, the result of which has been to produce many truly desirable varieties. From those examined, your committee have selected and caused drawings to be made to the number of about thirty; had time permitted to have examined the balance more critically, it is possible that the number selected would have been increased.

These drawings, with a history of the specimens they represent, including varieties ripening in succession from May to November, are herewith respectfully transmitted to the executive committee of the society, to be preserved by it for future reference or any other purpose, tending to the advancement of Southern pomology.

A large addition to the present number of varieties worthy of cultivation, will doubtless be discovered and adopted by your committee, as occasion will present; and should your honorable body continue to offer the same liberal premiums that have this

year characterized their acts, it will, beyond question, induce fruit growers to present many valuable specimens that would otherwise remain known to but few, tending at the same time to expedite and assist our duties.

Your committee respectfully suggest that some efficient means be adopted to collect and supervise those species of fruits that come to maturity at periods which render it impossible for them to be exhibited at the annual exhibition of our State Society.

Your committee feel gratified in the anticipation that, at no distant day, Georgia will stand the foremost state in the Union in the production of delicious and beautiful fruit, and that instead of importing from the North, she will become an exporting state in that line; as we now have varieties that will favorably compare, and probably excel, in every requirement, the choicest varieties grown there. And, in conclusion, we are of opinion that Southern seedling fruits are better adapted to our climate, and produce finer and better crops, than trees imported from the Northern states. All of which is respectfully submitted, etc.

J. VAN BUREN, *Ch'n.*  
JAMES CAMAK,  
ROB'T. NELSON.

November 24, 1852.

*Description of thirty-two varieties of Apples adapted to the South.*

SUMMER APPLES.

1. May Apple.—This is the earliest apple we have, which constitutes its only merit; it being of a sour astringent flavor, and only worthy of cultivation from its early season of ripening. Ripens last of May to the middle of June.

2. Carolina June, or Red June.—The origin of this apple is not known. It is very generally cultivated throughout the Carolinas and Georgia. Its early period of ripening constitutes its chief merit—the tree frequently produces two crops in a season. It is brisk, juicy and pleasant, without any peculiar flavor. Ripens from last of June, through July. It is a great bearer, and scarcely ever fails of a good crop.

3. Habersham Apple.—Found growing in the orchard of the subscriber—name not known. Ripens about the 15th of July. A very good early apple, both for cooking

and dessert. Second-rate. (Named by committee at the Fair.)

4. King Tom.—This is a very beautiful apple, as well as a singular looking tree. The apple resembles an orange in form and color—is of a spicy, sub-acid flavor—flesh yellow and rather tough, and hardly first-rate. Ripens about 15th of August, and keeps for some six or eight weeks. The tree forms a low head, with long, thick, blunt limbs, which entwine through each other like snakes, and uniformly bend down toward the ground, giving it a very singular appearance, being entirely different from any other tree. The fruit grows upon the end of the limbs. The tree is a regular bearer, and bears pretty fair crops—fruit medium size, somewhat large, with a long, stout stem. Introduced from North Carolina, but I have been unable to find out its origin.

5. Clark.—A seedling growing upon the lot of Robert Campbell, Esq., Clarksville, Habersham county, Ga., and raised by A. J. Nichols, Esq. Fruit large—very good flavor; sub-acid. Ripens about 10th of August. Tree upright in form, and vigorous, but rather a shy bearer as yet. It may become more fruitful with age, as it is not more than eight or ten years old. Fruit green, with some russet about the stalk and slightly sprinkled with it.

6. Autumn Apple.—A sweet apple from the farm of Mrs. Geo. W. McAllister, near Clarkville, Habersham county, Ga., in an orchard planted by Richard Cox, about 1820. Name not known. Rather flat in shape—medium size—ripens about 1st of August—very sweet, with a white and rather hard flesh. Stem very short, and deeply sunken; calyx wide, and open into the apple; considerable russet about the stem. A free, upright good grower, and bears abundantly. Nearly first-rate in quality as a sweet apple. A good deal ribbed in shape.

7. Julian, or Juling Apple.—This is one of the very best early apples; far better than the vaunted Early Harvest apple, of the North. It ripens about the 10th of July is rich, juicy, fine flavored, and very crisp and tender fleshed, and white. It is a beautiful looking fruit, rather above medium size, tapering somewhat toward the eye, and beautifully marbled and striped with

carmine. I am informed that it was first introduced into Pendleton, South Carolina, by Mr. John Juling, from Virginia; and from him it has been widely disseminated through South Carolina and Georgia, and is justly a favorite. It is in keeping till 1st of September.

8. Baldwin.—A Massachusetts apple; a fine flavored fruit, ripens about the 15th of August, but does not keep well more than a month. Tree grows well, and bears fine crops.

9. Carnation.—From a tree growing on the farm of Mrs. McAlister, near Clarks-ville, Georgia. The tree was planted about 1820, by Richard Cook. Fruit medium size; a delicious sub-acid apple, fully first-rate; dark red, splashed with russet; flesh white, brittle, and very juicy. Ripens about 10th August. Both the stem and calyx are sunk in a very deep depression. I know of no autumn apple superior to it in flavor.

10. Queen, Sheep Nose, Horse Apple.—Ripens about 1st of August; pretty well flavored; a little astringent. Tree very fine shaped, with a great quantity of dark green foliage. A tolerable bearer; does not keep long.

11. Hugh's Crab.—Ripens about 10th of August. Good, sprightly, sub-acid flavor; great bearer.

#### AUTUMN APPLES.

12. The Wonder.—This is one of the largest, the most splendid in appearance, and one of the first quality as regards flavor. It is rather difficult of transportation, as it becomes very mellow on ripening.—Every cultivator of good fruit should possess it. No apple can be found superior to it in every respect, either north or south. Ripens 10th of September.

13. Winter Horse Apple.—The name of this apple is not known, nor the place where it originated. By some it is called the "Winter Horse Apple;" but it is an autumn and not a winter apple. It ripens about the 1st of September, and keeps a month or two; and is a very good, rather acid fruit, of large size, and very flat in shape; the stem sunk in a deep cavity, with some russet about it; calyx very large and open, and also sunk very deep in the apple. It is quite an abundant fruit. The specimen from which the drawing is taken was grown on the farm of Gabriel Lisk, Sr., Esq., in

Habersham county. It is a little covered with white bloom.

#### WINTER APPLES.

14. The Buff.—A well known apple, which originated in Haywood county, North Carolina. The original tree was found growing on the farm of a German by the name of Buff, from whom it takes its name. It is a seedling, raised by the Cherokee Indians. Many fine varieties have been grown by them, as they know of no other way of propagating fruit than from the seeds. It is a fine, large apple, nearly first-rate; a good keeper, and, frequently grows to an enormous size, weighing from a pound and a quarter to a pound a half. The tree is a prolific bearer, and of robust habit.

15. Nickojack.—This apple originated with the Cherokee Indians, in Macon county, North Carolina, and takes its name from a creek of the same name. It was brought into notice and is exclusively cultivated by that enthusiastic and liberal gentleman and pomologist, Silas McDowell, Esq., of Franklin, North Carolina. It is one of the finest winter apples, and a delicious fruit withal; of a brisk acid, and fully first-rate; ripens late, and keeps well until May. Recommended for general cultivation. Size from medium to large.

16. Spann.—This apple was exhibited by William Murray, Esq., of Whitfield county, Georgia. It is said to have originated with the Cherokee Indians; color, green ground, partially striped with red; said to keep well till January or February. A fair, good acid apple, nearly first-rate. Tree said to be a good bearer; form upright and thrifty.

17. Murray.—This fine specimen was also brought into notice by Mr. Murray, of Whitfield county, Georgia, and was named after him by the examining committee at the State Fair of 1852. The committee consider it a fruit worthy of extensive cultivation. Size from medium to large; flavor fine and brisk, being a pleasant sub-acid.—Said to keep well until March. Both calyx and stem are deeply sunk. Tree said to be very prolific, and its habit pendant; the fruit borne principally from the end of the limbs. Local origin not known.

18. Walker's Yellow.—A seedling from Pulaski county, Georgia, and presented at the State Fair of 1852 for the first time. A fine fruit, and recommended for general

culture, from its having originated in a lower portion of the state. It is of good flavor; ripening from the 15th to the last of October. Tree of vigorous and upright growth. This will probably prove to be a very desirable variety for Southern culture. It was brought into notice by George Walker, Esq., of Longstreet, Pulaski county, Georgia.

19. Cullasaga.—This apple was raised from the seed of a Horse Apple, by Miss Ann Bryson, of Macon county, North Carolina. It is an apple of first-rate quality, of a pleasant sub-acid flavor, and highly aromatic, fully as much so as the Spitzenberg, or Newtown Pippin. It is of good size, frequently large; keeps well, and is recommended by your committee as first-rate, and worthy of the attention of every fruit grower.

20. Lady's Blush.—A specimen presented by Z. R. Jones, Esq., from DeKalb county, Georgia; said to have been brought originally from Ohio. It is a large, beautiful and first-rate variety; a good keeper, of fine flavor, and deserves further dissemination and extended culture. Form rather flat and conical; wide and very open calyx, which is set in a slight, narrow depression; stem short and stout.

21. Berry.—This apple was introduced into Habersham county, Georgia, from Lincoln county, North Carolina, by John Berry, and hence its present name. Nothing is known of its origin or history. It is not a first-rate fruit in flavor; but its long keeping quality, and fine size and appearance, renders it a general favorite. It is slightly acid in flavor; color of the flesh greenish; tree of vigorous and upright growth, and very prolific. Ripens late in October, which renders it a valuable winter apple. Size large.

22. Disharoon.—This apple was first found in the possession of a gentleman of the foregoing name, in the lower part of Habersham county, Georgia. It is probably an Indian seedling, and is an apple of fine aromatic flavor, and in some seasons keeps well until January and February, at other times decaying in December. Flavor a sub-acid, and quite aromatic. It is, doubtless, of the race of Pippins, and resembles the Newtown not a little. Size from medium to large; tree upright and vigorous.

23. White.—This apple is frequently found in the orchards in Habersham county, Georgia.

Where it originally came from, no one knows. It is a fine apple for cooking and drying, being rather too acid for a dessert fruit. It is of a crisp, tender, and juicy texture, and keeps well until January. The tree is of a drooping or pendant habit, with long, slender twigs, from the end of which the fruit is borne. Size of fruit from medium to large.

24. Summerour.—This is a splendid winter apple, originally from the orchard of Mr. Summerour, of Lincoln county, North Carolina, and now extensively cultivated in that state and the upper part of Georgia. Its flavor is a pleasant acid, and may be considered first-rate in quality. It is deserving of extensive cultivation throughout this state, as its equal will rarely be met with for all purposes. Size large and fair.

25. Horn Apple.—Origin and locality not known. Exhibited at the Fair of 1852. A pretty fair apple, and said to keep well through winter; very smooth and fair to look at, and of good acid flavor. Presented by Mr. Rutherford. Size medium.

26. Shockey.—Originated in Jackson county, Georgia. Size medium; color orange ground, nearly covered and striped with red. Keeps well till March. A pleasant sub-acid flavor, nearly first-rate. Tree with a wide, spreading head, and slender, pendant twigs. This apple was presented at the State Fair of 1852, by William H. Thurmond, Esq., of Atlanta, Georgia.

27. Red Winter Pippin.—This apple was exhibited at the State Fair of 1852, by Z. R. Jones, of DeKalb county, Georgia, and said to have been introduced from Western Virginia. It is a fine-looking apple, and of good flavor, and keeps well until January. It is of singular shape; a good sub-acid flavor, inclining a little to astringent; size medium to large. Probably a Pearmain instead of a Pippin.

28. The Queen.—There are two distinct apples known by this name. This apple is much superior to the other, which is a summer apple, while the above is a winter fruit, and of first-rate quality, and one of the most beautiful. It evidently belongs to the Pippins, and the committee take pleasure in recommending it to the favor of the public, as worthy of general cultivation.—The Summer Queen is more conical in its form, and inferior to the above; a beautiful

and symmetrical ovate, calyx slightly sunk, stem three-quarters of an inch long, color a fine golden yellow. Probably a good keeper. Size medium to large. Exhibited by Z. R. Jones, Esq., of DeKalb county, Georgia, and said to have been introduced from Western Virginia.

29. Buckingham.—A seedling supposed to have originated with the Cherokee Indians, and found in Cass county, Georgia. It is rather a shy bearer, and keeps till December; is of second-rate flavor, and inclined to rot. Size large, and a fine fruit to look at. It was presented at the State Fair of 1852, by Colonel William Murray, of Whitfield county, Georgia.

30. Wall.—This beautiful and valuable winter apple originated on the farm of Garret Wall, in the county of Rabun, Georgia, and is supposed to be a seedling raised by the Cherokee Indians. The tree is very prolific, and the fruit is in season from October to February.

31. Mangum.—Said to be a native of Jackson county, Georgia, and exhibited by William H. Thurmond, Esq., of Atlanta, at the State Fair of 1852. An excellent apple, of medium size, and keeps well till March. Tree very prolific; certain of a crop.

32. Norton Apple.—A truly beautiful and good fruit, of large size, and said to keep well until May. Tree vigorous and prolific. Exhibited by Colonel William Murray, of Whitfield county, Georgia. Supposed to have originated with the Indians.

J. VAN BUREN.

CLARKSVILLE, Georgia, December, 1852.

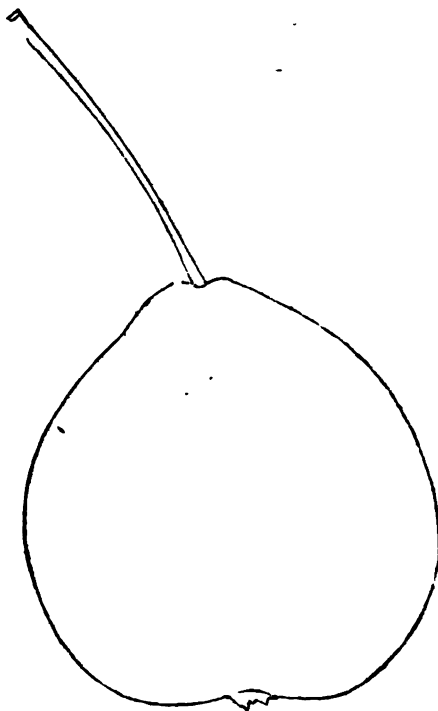
—*Southern Cultivator.*

#### Des Nones Pear.

At the last autumnal exhibition of the Cincinnati Horticultural Society, a handsome and very interesting contribution of fruits was received from the Syracuse Nurseries, which were examined by a select committee as they ripened. Notes of the qualities were taken and outlines drawn, which, unfortunately, were burned at a recent fire, and are lost; but not until after the figure of the Des Nones was secured and the cut made, which is now used in the illustration of this notice.

The notes of quality are gone, so that I copy, from the Horticulturist, Mr. Fahnestock's description, as follows. Our committee declared this to be a superlatively good variety. Unfortunately, on application to the nurseries, no stock of the variety was found to satisfy the demand which was created here.

We send you by express today, specimens of a pear, new to us, which has ripened on our grounds this season for the first time. We received the trees from M. Andre Leroy, of Angers, under the name of *Des Nones*. We have never seen it adver-



tised, either in his or any other catalogue, nor met with a description of it elsewhere. We think you will join with us in pronouncing it a pear of the very highest excellence, combining, in an eminent degree, the high flavor of the Seckel, with the delicious melting qualities of the Belle Lucrative. The tree is a luxuriant grower, forming a handsome pyramid, and is an abundant bearer. The fruit is uniformly as fair as the speci-

mens now sent. It commenced ripening about the 10th of September; these specimens, now lapsing into luscious perfection, being among the last. Among a hundred varieties, many of them new, which have ripened on our grounds the present season, we have found no one, if we may not say that equals it, we certainly may, that surpasses it. The accompanying outline and description *pro forma*, are at your service, if you think its merits entitle it to be placed before your readers.

Fruit medium size, regularly turbinate. Skin smooth, fine clear light yellow, covered with numerous small brown dots. Stalk from one and a half to two inches long, slender, inserted in a very slight depression. Calyx small, closed, and placed in a small shallow basin. Flesh whitish, very juicy, sweet, melting, and delicious, with an exquisitely fine rich flavor and perfume. Ripening from the 10th to the last of September.

We are, very respectfully, etc.,

THORP, SMITH, HANCHETT & CO.

SYRACUSE NURSERIES, SYRACUSE, October 4, 1852.

#### Cultivation of Orchards.

A RECENT number of the Farmer contains a report of a discussion on the subject of the cultivation of orchards, in which all the speakers agreed in opposition to the doctrine generally taught. In that discussion, two very distinct and different things—usually associated it is true, nevertheless not identical—seemed to me to be confounded, namely, the mere tillage of the soil of an orchard, which is one thing, and the growing and removing from it of exhausting crops, which is quite another. With a due reference to this distinction, probably the discrepant observations and opinions might be brought to harmonize.

Surely no reflecting man, at least no one acquainted with the first principles of agricultural science, will maintain that the bearing off in annual succession full crops of corn or potatoes, with no corresponding return to the soil, has the effect to increase the quantity, or to improve the quality of the produce of the trees. No soil can long bear double cropping. The effect of cropping an orchard with grain must sooner or later prove detrimental to the trees and the

fruit. The effect is essentially the same, if the crop harvested be grass from the sward. Whatever is gained in the hay, is so much lost in the fruit. In fields devoted to grazing, the same injury does not accrue, for the obvious reason, that a constant return is made to the soil, fully equivalent to the produce consumed [?] Orchards in meadows and cultivated fields would enjoy the same impunity, were care taken to supply them with sufficient and suitable fertilizing materials.

As to the question, whether orchards should be plowed or not, without reference to the production of any other than their own legitimate crop, there certainly can be no one rule to fit all orchards, any more than there can be one only system or routine of cultivation and management for all soils. It becomes an individual question, to be answered for each case by itself, according to the nature and condition of the soil and of the trees. No general solution can safely be more explicit than the following, which I offer: that probably most orchards which have lain long in sward will be benefited by loosening the turf and turning a new surface up to the sunlight and the air; and some will thrive best when this process is repeated oftenest; but the crop cultivated, if any, should be that which is least exhausting to the soil. POMOCULTOR.

—*Prairie Farmer*.

#### Late Pears.

THE following varieties of pears are not yet much known, although they have been some few years in this country; a few words respecting them may, therefore, be acceptable.

Bergamotte d'Esperen.—This is in shape, size and color much like the Autumn Bergamot, which everybody knows: the tree is very hardy, and grows well on the quince, bearing profusely as a pyramid or espalier, and deserves a south wall in a cold climate. My specimens commenced to ripen in the beginning of March last, and continued good till the end of April, (in some seasons they will keep till the end of May.) They were quite melting and very juicy, with a most agreeable flavor; not so rich as some of the autumn pears, but really good.

Besy d'Esperen.—This is another pear

raised by the late Major Esperen, of Malines; it is of nearly the same shape and color as the preceding, but larger; my specimens ripened toward the end of last January; they were melting, juicy, rich and excellent. The tree is very hardy, growing most freely on the quince, and bearing well as a pyramid; this and the Bergamont appear to be of the Winter Nelis tribe, by their leaves and tender shoots, and also in the color and form of their fruits. I think it very probable they are both seedlings, raised from that finest and best of our winter pears.

Belle de Noel or Belle apres Noel (Esperen.)—This should be, and generally is, a Christmas pear, but my specimens ripened about the middle of last January; they were flattened, and something of the Bergamot shape, about as large as a middle-sized Crassane pear; color bright yellow, red on the sunny side, and very handsome. This is a very rich and high flavored melting pear; not a vigorous grower on the quince, but forms a pretty pyramid, and bears well. For all the above, walls with west, south-east, or east aspects, in the middle and southern parts of England, would be eligible, where it is not convenient to grow them as pyramids or espalier.—*Gardener's Chron.*

#### Peaches—Peach-House Culture.

THE following article upon the plan of ripening peaches in England, will explain the high cost of the fruit there. The practices pursued are very philosophical and will give us valuable hints, especially as to pruning. They will please those who have read the valuable articles by our friend, L. Young.

About this period, February, the early peach-forcer will have his blossoms past setting, and the fruit as large as peas, or, it may be, more advanced; the majority, however, will be only commencing, and it will be well to show forth the necessary proceedings in detail, for the sake of the uninformed. The first thing is to thoroughly cleanse the house, if one be appropriated to them; walls cleaned, lime-wash, with plenty of sulphur combined, applied; and, indeed, everything done which can contribute to the wholesomeness of the air within. In addition, a

slight stoving with sulphur, by blending a handful or two with decayed sawdust, and burning it in a vessel containing some red coals. The latter is an awkward game in unpracticed hands; but I have been in the habit of using sulphur extensively for the last twenty years, and never suffered but once—that severely—which has induced the necessary amount of caution ever since. In applying it as a paint to flue-pipes, or other heated surfaces, I have never known any damage ensue, provided the surface to which it was applied never became too hot to grasp tight with the hand. It is to be hoped that the trees, whether planted out or in tubs, in pots, or boxes, have received the dressing over their shoots so often recommended; if not, it is too late to venture it above half strength.

And now, we will suppose the trees trained, and with another leap imagine them (the house having been closed a fortnight, and a moist atmosphere sustained,) just unfolding their blossoms. A somewhat drier air must be maintained now, in order to effect the impregnation of the blooms, without which all labors will be lost. There are those who disregard this point; but most good gardeners recognize the importance of a dry air for the dispersion of the pollen. Livelier fires should be kept, especially in bright days, getting them up betimes in the morning, and giving all the air possible about ten o'clock. About twelve, the trees may be well shaken with a kind of short sharp jerk; this, of course, has a tendency to disperse the pollen or male dust, which, under the above circumstances, will have become subtile; and this process may be repeated until the corolla falls, when, of course, the fate of the tree is sealed, as to its fruit. Syringing must now be resumed, morning and afternoon; the former about seven to eight, the latter about three o'clock, battering the trees smartly from both ends of the house, and crossing the direction of the water in every conceivable way. As to temperature, I will give a table before concluding this subject.

At this period the development of the young spray will take place, for this follows immediately on the blooming process, and constitutes a most important period. Of course, everybody knows that disbudding has to be practiced on trees artificially cir-



cumstanced. We should pause at this crisis, and endeavor to ascertain what relation the mere leaf bears to the infant peach. That a tree in full health contains sufficient nourishment to set this infant peach "on his legs," there can be little doubt; but that this stock is inexhaustible, must be denied. Nature, with the buds of trees, even as with seeds, has been exceedingly bountiful; not only is there enough for present need, but even a surplus; sufficient, indeed, to sustain the young fruits until the new elaborations take place. Such being the case, we suggest very moderate forcing until a fresh and extra supply of accretive matter is obtained, which will be when some of the first leaves are pretty well developed—say in another fortnight. Disbudding then must be attended carefully to, almost daily, in order to force a free development of the foliage on the reserved shoots, and to prevent confusion. On no account should a general disbudding take place at once; it is too severe a procedure, and, doubtless, has a tendency to paralyze the root-action. Commencing as soon as the quality and position of the shoot can well be distinguished, we would have the process carried on until the fruit is as large as marbles, by which time it may be completed; and the next point is to commence a course of judicious stopping.

Let us now take the root into consideration for a moment. I have said nothing about watering, at present, thinking that, as a matter of course, the borders (inside) would be necessarily dry, and that watering had been resorted to. If such has been omitted, let the loose and exhausted soil be scraped off the border surface, and then the border thoroughly watered with water of the temperature of 80°. The very next day, let a second application be made, using, in the second case, good manure-water of the same temperature. Four ounces of Peruvian guano to the gallon will be very proper; I prefer, however, combining with it soot and dunghill-drainings. The day following, the border may receive a new surface-dressing, about three inches of such loamy compost as peaches like, rather rich; and this may be coated with two inches of rather fresh horse-droppings. These will constitute a good medium for subsequent syringings and waterings, the latter with a rose-pot, to filter through.

Return we now to the branches. In disbudding, care should be taken to leave the lowest shoots in any given angle or space between two branches, in order to prevent nakedness. Where two can be found in such situations, the lower may be pinched when three or four inches in length; this will make it a reserve or nursery shoot; it will form many buds toward its base for successive wood in future years. As to the rest of the disbudding, one remark is necessary: so manage affairs as, that at the end of the disbudding period, not a shoot is reserved but what is needed for the next year's operations. In general, from three to four young shoots may be reserved on any given young twig of the preceding year; say, one a leader, a couple on its sides at several inches apart, and a lower one, which, as before observed, if needed for reserve shoots in succeeding years, may be pinched when three or four eyes in length.

Let not, however, our readers be bound by this practice alone; we would not have them slaves to any mere routine. There is, after all, a sort of willfulness in trees which is ever at variance with dry rules; and there are many occasions in which, instead of attempting to lead, we ought to follow. Many exceptional cases will arise which will require slight deviations from rules of practice, however good the latter may be, or however considered useful as general maxims.

Disbudding having been thus carried out, let the dresser turn his attention to what are termed "robbers," that is to say, over strong shoots of the present year. In order to know these well the character of the wood must be studied. One thing is tolerably certain, and that is, whenever any young shoot shows the least tendency to burst its side-buds, such, unless assuming the character of leaders, where there is much trellis space to cover, may have their points pinched at once about six inches above the point where this axillary spray is sprouting. This course persisted in, the wood next in point of strength, or, in other words, the true bearing wood of the succeeding year, will be much encouraged, and thus the strength of the tree, in a great degree, equalized—a most desirable result. Indeed, it is not possible to carry out this equalization by any other means. I have tried all other plans during the last thirty years, and have con-  
nected

over every opinion during that period, but if equalization of strength be a maxim, there is assuredly no other way by which to attain it.

But the benefits of this process do not end here. The fruit is enlarged in consequence. It is a well ascertained fact, that the fruit from young and gross peach and nectarine trees is not so fine as from mature trees, steady in growth; and why? Simply because in the former case there is a too rapid dispersion of the sap to allow of that kind of concentration of accretive matter which the mature and steady-growing tree possesses, and which is the surest accessory to highly fed and flavored fruit. But whether or no these reasons may suffice, certain it is that such is the case.

My advice then, is, continue stopping as long as a proud shoot remains, even, if necessary, past the ripening time, unless, as before observed, a space of walling or trellis requires covering, when, of course, it becomes necessary to promote the extension of the tree: albeit, young laterals are employed to carry out that most necessary object.

I may now point to the absolute necessity for thorough cleanliness in everything connected with peach forcing; at least, as far as the atmospheric conditions are concerned; and as to insects, no man will ever excel in peach culture who permits their ravages, even for a very short period. I will venture to affirm that two-thirds of the evils which have formed the subject of complaint about the failure of peaches, and which have been both loud and long, have arisen from the ravages of the peach aphid alone. Climate is blamed, soil is blamed, winds complained of, a too damp situation, etc.; they must be covered, says one; they must not, cries a second; wrap the stems in haybands, cries a third; whilst a fourth insists on the necessity of glass walls, etc.

Now it is notorious, that first-rate peaches, in abundance, the crops seldom or ever missing, are grown annually in situations combining all these disadvantages, the only nostrum being a simple mode of treatment, in perfect accordance with the natural habits of the tree, and a retarding of the blossoming period by all possible means. But somebody may say, How do you prove the ravages of the aphid or peach-louse to be so im-

portant? Thus: The aphid is sure to commence operations the moment the trees are out of blossom; the development of the young spray takes place at this period; this young spray it is which should furnish the future crop; if this first effort is crippled and paralyzed, which it will assuredly be by three days' ravages (unmolested) of the aphid, so surely will the next effort be delayed three weeks, at least; and this loss of three weeks it is which our climate may not tolerate. In very truth, if A. B.'s wood is three weeks later than C. D.'s, the presumption, yea, the fact is, that it will be less ripened by three weeks in October. Now this, although somewhat directed to outdoor peaches, may, I trust, enlighten our patrons as to their indoor trees; let them, we say emphatically, beware of insects. Tobacco-water and fumigation are within the reach of all.

I may now close this paper with a few things of a more general character, previously omitted; and, first, temperatures. Throughout the peach-forcing season, beware of high night temperature; the peach can do little in the dark, yet it is astonishing, when the elaborative powers of the leaf commences, what progress may be made by taking advantage of an afternoon's sun, inclosing a great amount of pure solar heat. A very high maximum, as well as minimum point, therefore, may be given, or in other words, a wide range of temperatures; at least, so I have found it. As a broad maxim, let the heat exactly follow the light. To begin, dating from blossoming time, let us say 40° to 50° by night, and 60° by day, laying on 15° more by sunshine, if convenient.

When swelling fast, say 55° by night, and nearly 70° by day, running to nearly 90°, if you will, if sunny. During the stoning process be more cautious; no disturbing causes now. Be content with a somewhat moderated pitch. Through all these proceedings let young peach-forcers take care to give all the ventilation possible. Ward's cases will not suit peaches so well as Fern's. And remember, that at ripening time they must not ripen fast; if luscious peaches are required, throw your sashes wide open as often as you dare.

R. ERRINGTON.

—Cottage Gardener.



## The Vineyard.

### AMERICAN WINES IN FRANCE.

*To the Officers and Members of the Agricultural Society of France.*

By request, I take pleasure in sending to your exhibition, two bottles of Catawba wine, of the vintage of 1851. In the winter of 1848-49, I laid out two vineyards of about six acres, with two year old roots of the Catawba grape.

This vine is a native of Buncombe county, North Carolina, and has also been found wild upon the Arkansas. This native grape contains a large proportion of sugar. The wine acquired a fine flavor and bouquet, and great alcoholic strength; and what makes it more valuable to us, is its endurance of cold, having withstood 23 degrees below freezing point of Reaumer last winter, when most other native and foreign vines were killed by the cold.

Our soil is a fine calcareous clay, deposited by an ancient tranquil sea, the rocks belonging to the lower part of the transition formation, but lacks the proper quantity of potassa and soda, so necessary to vine raising. In one of my vineyards, I put a quantity of silicious potassa, and at the time of hoeing in May, I add a handful of wood ashes to each vine.

Bottle No. 1, contains the wine from this vineyard; and No. 2, from the vineyard where the soil was in its natural state. The

specific gravity of the sweet must was 1.093, and at the time of bottling, August 18th, 1851,

No. 1, at 60° Fah., was 0.992.

No. 2, " " " 0.996.

I believe that the potash mixed with the soil, when brought up from the roots with the sap, will first combine with the tartaric acid, and that at the same time induces the malic acid which predominates in our wine to change into tartaric acid, which is precipitated during and after fermentation, as the bitartrate of potassa. This precipitation would not occur with the more soluble salts of malic acid.

I shall thank the members of your Society to inform me whether similar experiments have been made in France, and with what effects. Very respectfully,

L. REHFUSS,

President of the American Wine Growers' Association, Cincinnati, Ohio.

To which the following answer has been received, and, with the report, has been translated for the Review:

IMPERIAL CENTRAL AGRICULTURAL SOCIETY, }  
Paris, 5th Febr., 1853. }

SIR:—The Society had examined the two samples of Ohio wine you had the kindness

to send us, through Mr. Walsh, the consul of the United States.

By the report and resolution, which were accepted, I received an order to express the thanks of the Society for your communication, which was received with great interest. At the same time, I have the pleasure of sending you inclosed herewith, the report of the commission, allowing myself to express my wish that it may please you to communicate to us the new experiments made in that interesting branch of agriculture, in the state of Ohio. Be assured your communications will always be accepted with the greatest interest.

PAYEN, *Sec'y.*

Report on samples sent by L. Rehfuß, President of the Wine Growers' Association of Cincinnati, Ohio, —by MM. Payen and Bourchardat.

GENTLEMEN:—You sent us for examination two samples of wine, Catawba and Isabella, raised in Cincinnati in 1851.

The vineyards producing this wine have been set out in 1849, with two year old roots. These wine samples belong to two varieties of American vines, the Isabella and Catawba.

The Catawba is a native of Buncombe county, North Carolina: was lately also found on the Arkansas river.

Mr. Rehfuß gives the following as their descriptive properties: The fruit contains a great quantity of sugar; its wine is very tasty, having a rich bouquet; but its endurance of cold makes it invaluable. The must of the Catawba grape usually has a specific gravity over 1.090, nearly equal to our Pineaux must.

Various attempts were made to make wine in America. Mr. Lakanal tried the vine culture in Kentucky for twenty years, but without success. In Vevay, Indiana, the Swiss vine dressers had once made an effort, but their small wine country exists now only in the memory of the inhabitants.

It is said Brazil produces a similar vine, which fruits in March, May and September, but this continual production of the vine can not produce a good wine.

Two circumstances require our particular attention. *First*, that to the native vine, the preference has been given. *Secondly*, that sparkling wine has been produced. The American vines, so exactly described by our venerable M. Michaux, are not so easily affected by a change of temperature as our tender varieties. They do not bear fruit and flowers at the same time as our European vines, being raised in a hot and humid climate.

The American vines in our collection bear very little fruit, and, therefore, can not be raised with profit by us. Will this be the case also in America? Will continual culture make them more fruitful? This the future will show. The strong and peculiar flavor of the grapes of the American vines, will not be easily reconciled by our delicate palates.

The American wine samples particularly recommend themselves by their neat, clear color, and their ability to furnish carbonic acid, and become effervescent. The Isabella wine is of a rose color, has a particular perfume, contains .11 of alcohol, and an abundance of sugar. The wine gave .52 dry residue, double the quantity of our best white sparkling wine.

The Catawba is of a white amber color, has less of this strong, peculiar bouquet, contains 11½ per cent. of alcohol, with a great quantity of sugar. Evaporated to dryness, it gave .61, or three times as much as our Chablais wines.

No doubt the wines in America will soon be much perfected; it shows great sagacity that the native vines received the preference there, and particularly as sparkling wines have been produced from them. We have

the honor to request the Society to tender Mr. L. Rehfuß their thanks for his interesting communication. PAYEN, Sec'y.

#### Grapes in Texas.

THE Houston Telegraph appears to be quite desirous that the culture of this luscious fruit should be introduced into Texas. Go on with your efforts! Who knows, until fair trial be made, what great success may attend your efforts? We commenced our experiments on the Ohio river, years since, and have only now begun to realize our reward, having much yet to learn. Do not proceed rashly; learn from your predecessors. Select your sites with judgment, and especially select your vines with care. Do not be persuaded to rely upon foreign varieties; some may answer with you, that have failed in this region. Endeavor to find a vigorous native vine of good qualities, for such there may be among your wildings, though the specimens of wine from Texas grapes that have reached us, have been very inferior.

There is scarcely a doubt that the culture of grapes might be made as profitable here as in any part of Europe, or in the vicinity of Cincinnati. It is estimated that upward of 1,200 acres of land are now under cultivation in vines in the vicinity of Cincinnati, on the Ohio. The products of these vineyards is said to amount to upward of three hundred thousand gallons of wine, valued at as many dollars, and affording subsistence to upward of two thousand persons.

The climate of Texas being similar to that of Italy and Spain, must be more favorable to the culture of grapes than that of Ohio; and we are confident that vineyards are more profitable here than in any part of the valley of the Ohio. We believe the only attempts that have been made in Texas to cultivate the grape have been on the level region on the coast. These attempts have all failed, for the same reason, probably, that similar attempts have failed in Europe, where the vineyards are never found on the plains,

but on the hill-sides or mountains, and rich earth is often carted several miles to form terraces on the mountain sides for vineyards. The vines thus cultivated have thorough drainage for their roots, and they grow on, year after year, even for centuries, without being subject to blight or mildew.

The Mustang grapes in Texas grow on, year after year, in the same manner, year after year produce successive crops of grapes which are as luxuriant and free from defect as those of the best vineyards of Spain or of Europe. We recently visited the valley of New-Year's Creek, Washington county, and were astonished to notice the immense quantities and the extraordinary luxuriance of the grape-vine. They were extended in many places in festoons, several rods in length, and loaded with tons of fruit. We believe we saw several vines, each one of which would have yielded a barrel of wine.

If the native grapes grow thus luxuriantly on these natural terraces, surely the choice varieties of the grape might be cultivated there to advantage. The valley of New-Year's Creek probably contains a hundred thousand acres which are as well adapted to the culture of the vine as the lands in the valley of the Rhine; and if an enterprising and wealthy capitalist, like Mr. Longworth, of Cincinnati, would encourage a few poor emigrants from the vine regions of Europe to commence the culture of the grape in this beautiful valley, in a few years Texas might furnish the Atlantic cities with wine of a quality equal to the best which has ever been imported from Europe.

#### Vineyard Calendar for April and May.

THE article upon this subject, intended for April, was crowded out of the last Number. We shall, therefore, comprise in the present article, the observations for both periods.

The vines should have been tied to their stakes, as previously directed, in the low form, or where vine trellises are used, horizontally and well secured in their places by suitable osiers of the yellow willow. A damp or wet day must be selected for this process, as then the vines are less liable to

break at the points where they are bent ; in doing this, a careful hand always gives the limb a gentle twist. Planting in the vineyard, whether cuttings or rooted vines, and planting nurseries of vines, is to be attended to at this time.

The especial work for May will be to *rub out* the eyes where they are superabundant. The strongest should be preserved. This is to be done as soon as the blossom buds are sufficiently developed to guide us in leaving fruitful branches. *Pinching in* and *tying*, are to be practiced as soon as it is observed that some of the young shoots are growing ahead of their fellows, which must be checked by pinching, and secured by tying with damp straw.

*Cultivation.*—Many *vignerons* insist upon an early hoeing of the soil ; others prefer waiting until the weeds have started, when they may be turned under. This process is usually performed with a two-pronged hoe ; others prefer the plow, which in careful hands, has many advantages, as it is a great labor-saving machine. Ashes may be applied at the same time.

*Insects.*—Watch closely the inroads of these marauders, and remove them as speedily as possible.

#### Letter from William Murray, Georgia.

THE following extracts from a letter received by Dr. Mosher, were read at the Horticultural Society, and handed to me for publication. The seed referred to were judiciously distributed.

I SOME time since wrote you a long story about the native grape of our mountainous region of Cherokee, Georgia. I forget what I may have written. I visited the Sandstone mountain but a day or two since, which is computed to be two thousand feet high ; on the top of that mountain I found grape-vines, all bearing fine fruit of extra

quality, one of which resembled the Catawba in its original or native state. As I was on the eve of setting out for Macon, in order to attend the Fair, I took some of them with me ; and although they excited considerable attention among the visitors, there seems to be a great deficiency of practical knowledge in such things in the South.

I expected to have gone to Murfreesville, last October, but was providentially hindered. I sent to my friends at Murfreesville, and had one of the old Catawba vines grubbed up and forwarded, but it never reached me. Our next Southern and Central Agricultural Fair is to be held at Augusta, next October. I strongly solicit a visit from some one of your Horticultural Society, as you will find that this is beyond doubt the best wine growing section of the United States, and fully equal to any in the world.

I inclose a paper of Irish potato seed, saved from the balls or apples last August. I sowed part of them in September, and on the second day of December, upon examining what I had planted, found a number of young potatoes from the size of a shot to that of a partridge's egg.

To you, Doctor, or the Horticultural Society, do I appeal for assistance in conducting an experiment which I have begun with the Irish potato, and its diseases. I have it in the same condition as in 1795-6. I inclose a paper of the seed to your Society, that it may select some one to take charge of and plant them when spring opens. I have some small potatoes from the seed sown in September last, and have many more to sow in the spring. I have two reasons for sending them to your Society : In the first place, there is more perseverance in your community in what are called *small matters*, which is the main constituent of all important discoveries. When occasion

offers, I will give you the remainder of my experience in the cultivation of that crop since 1796. Should we not succeed in teaching Massachusetts how to raise potatoes, we will, nevertheless, have the satisfaction of growing good ones for ourselves.

I will endeavor to show that by means of my experiment, I have discovered, first, the cause of the disease, and secondly a remedy for it. This remedy I have in our soil and climate. And I wish the people of the great West to succeed—especially Ohio. For then the North will have to send to the South and West for seed.

By the time you are ready to plant your potatoes I will write you again.

In health, I am truly yours,

WILLIAM MURRAY.

#### The Vinery.

THREE-FOURTHS, at least, of our garden possessors, who are in respectable circumstances, and who possess their little greenhouse, direct their first steps in exotic fruit culture to the vine.

It would appear, from the character of many queries, that the writers thereof desire to know more of the minutiae of grape culture. Of course, all readers are not precisely alike; all tastes not similar; all conditions not the same. One likes the very fundamental principles of culture; another thinks all such unattractive matters, and would prefer a cut-and-dry routine; and thus the world is compounded. In very truth, thousands who are fond of reasoning over principles, are obliged to resort to the latter off-hand way, inasmuch as they have not time, owing to their many engagements, to wade their way through the mass of conflicting opinions.

The majority of our readers will, by the time these observations reach them, have their vines budding, or, it may be, blossoming; and it will be well to show forth the routine of practice, step by step, through the earlier stages.

It is well known, that during the first swelling of the bud, up to the first peep of the young bunch, the advances made in what

is termed forcing can not be too gradual.—If this part of the process be hurried, the probability is that an insufficient number of buds will be developed; those chiefly which are furthest from the main stem, and which happened to enjoy a kind of monopoly in the appropriation of the supplies in the preceding summer. This, then, has a tendency to break in upon system, and to render the trees lean in regard of young wood for future years.

The moment the buds acquire size sufficient to distinguish their true character, what is termed *disbudding* should commence, whether on pot vines, or those otherwise situated. It must here be understood by beginners, that healthy vines generally may be expected to produce more shoots than it is expedient to have on them. Now, this disbudding is not a process of a day, nor even of a week; it is essentially progressive; and the latter is a fortunate circumstance, as it affords the operator the means of equalizing, in a great degree, the strength of the tree, inasmuch as it compels the subsequent developments to assume a progressive character also—a matter of great convenience as bearing on the operations. It is not easy to say, without seeing the vines, how many buds should be removed, and how many left on, so much depends on the condition and character of the tree. But I may observe, that it requires nearly a square yard of space, (superficial,) in the average, to produce a good bunch of grapes of say two pounds. This may make some of our young folks stare, but they should be well impressed with this idea before they proceed with the disbudding.

The fact is, it is altogether a question of light; and the *more roof* of a vinery it is, totally irrespective of all the interior area, that must determine the amount of produce. To produce a fair bunch of well-flavored grapes, there must be a shoot of about two feet in length, after what is termed severe stopping; and right and left of this, laterals which shade much, and occasionally overlap their neighbors—a thing, however, to be avoided; and at certain times they must be permitted to ramble somewhat freely, for reasons shortly to be offered; so that although the spray may not be confined to a given yard square, it will be found, on the average, to cast a shade on an area nearly

equal to a yard superficial. But, although this may at first astonish the novice in dis-budding, yet the least reflection will show that this amounts to an enormous produce, taking the quality as well as weight into consideration. For suppose a little house, twenty feet long, and having six rafters occupied with vines on the spurring system, each rafter sixteen feet long, here we should obtain above one hundred weight of grapes; no inconsiderable weight of a fruit so rich in saccharine principles.

And now let us hope our rising vine-men will study the capabilities of the vine; what *may* be expected, and what *ought not* to be expected. Grievous is it to see, day after day, a fine, strong, and willing horse doing double duty, and, perhaps, badly fed; and equally grievous to a good gardener, to see a willing Black Hambro' doing double duty, and the possessor, perhaps, wondering all the while how it is that his grapes will not turn black, and that they prove of more use in the kitchen than on the dessert table.

I now return to the digressive point. It will be seen that many buds have to be rubbed off; caution is, however, requisite.—Buds sometimes prove deceptive; if the operator were at all times to strip away, what at first sight appears, the weak buds, and reserve only the more coarse, he would not unfrequently find himself mistaken.—Some of the gross looking shoots will occasionally prove barren, whilst others, which at first did not promise much, will prove of eminent service. Thus, then, it becomes the vine dresser to be chary in his movements, and to suffer the proceeding to stretch over a week or two, which, indeed, is about the period nature herself presents for the operation. And here I hope to be pardoned for stepping a little out of my way to indulge in an idea that has often struck me, and, doubtless, many of the readers of this work, especially our clerical supporters—it is the singular agreement between the best vine-dressing practice in these times, and that of the days of our Saviour, who, it will be well remembered, draws a comparison between the vine and man. "Every branch in me that beareth not fruit, He taketh away; and every branch that beareth fruit, He purgeth it that it may bring forth more fruit." Here, how plainly we have our dis-budding, pruning, and all; or rejection, with the subse-

quent practice of stopping, training, etc., in order to enhance the value of the fruit. And, doubtless, it was the recognized practice of those days in the open vineyard.

Day by day, then, let the vine dresser watch the developments, and having enough of young shoots to select from, continue, as their character becomes really manifest, to secure the fruitful shoots in proper situations, and to strip away the worthless; in all these things, keeping an eye on future years, and the system of training he is pursuing. And on the heels of this operation, what is termed "*stopping*," must press.—Stopping means, simply punching off the end of the reserved shoot, in order to concentrate its strength at a given point; that is to say, the immediate vicinity of the future cluster of grapes. Now, I would fain have the unknowing readers of this work consider how this "*stopping*" operates; and if I be right, it operates in a twofold way—it concentrates all available power near the fruit, and it is opposed to the increase of hard wood.

Some may say, why should the latter be opposed? But surely the reason is obvious. It is not the vine that has the greatest amount of solidified wood, that has been the most profitable, inasmuch as timber is not the object. A judicious system of stopping, therefore, husbanding well the resources at command, and the throwing all possible power into the fruiting propensities of the vine, very naturally keeps down the tendency to produce mere hard wood. I venture these opinions thus far, thinking that, in accordance with the temper of the age, the dry rules of the olden time ought by no means to suffice. Philosophizing in material things, is not alone permissible, but highly to be commended, if conducted on recognized principles, and devoid of dogmatism.

Let stopping proceed, then, according to the rate of development of the young shoots; those reserved may be, according to the usual practice, stopped one joint beyond that where the bunch shows; from this very general practice, based on the recognition of the severe economy imposed in regard to *light*, I see no reason whatever to differ.—Where the shoots are robust, it is well to stop them soon after the "*show*" is well developed. This is a matter of expediency; for just in proportion as these are checked



in their rapid career, will be the increased strength of those subordinate shoots which are only awaiting a chance to become useful.

Thus may the stopping proceed until all have been subjected to the process, and by the time it is fully carried out, some of those first pinched will be about to develop lateral shoots, about the stopping of which practitioners slightly differ; some are for pinching the points immediately; others allow them to ramble a little. I do not think it well to be so very keen as to be constantly stopping, but believe it best for the system of the tree, to allow a little liberty in this respect. There can be little doubt, that the principal increase of root takes place coincidentally with the extension of the spray, and in a close ratio to it; and if such be the case, it is obviously good policy to suffer a free growth occasionally. However, as before observed, all these things are best done progressively, for so I have found it with all disbudding. An attentive vine dresser will be fingering about his vines almost daily; and there can be little doubt, that, supposing a given shoot to possess four laterals that require pinching, it would be better to suffer the operation to occupy a week, than to perform it at once.

Henceforward, the stopping will continue at intervals, until the berries commence stoning; by which time, if the vine has a good crop, the rambling propensities will have much diminished; and, indeed, I hold it good practice to suffer the vines to ramble unmolested during most of that period, for, as the berry remains nearly stationary as to mere size, there does not exist the same reason for close stopping.

Where there is a leading shoot required for extension, it, of course, forms an exception to the side or bearing shoots, and must not be stopped so close; especially in the case of young vines advancing up the rafters. It is the practice of some to pinch every lateral from the latter as they are produced.—From this doctrine, I beg to differ. One of the first objects with the cultivator, in the case of young vines, ought to be to obtain plenty of roots; but how can this be accomplished with this constant snubbing? It is a well-known fact, that the root can not extend rapidly without a corresponding extension of branch in any shrub or tree; reciprocity is nature's law in this respect, and

may not be altogether set aside. Much care should be taken over the thinning of the berry; many persons thin too freely; this, of course, produces larger berries, but such bunches dish up badly, and require packing.—*R. Errington, in Cottage Gardener.*

#### French Mode of Planting Cuttings.

LAST winter we read an account of the new French plan of putting out grape cuttings by bending them into an arch, and inserting both ends in the earth. We immediately rode to a friend's house and procured ten cuttings from a Lenoir vine, each of which was two feet long. Five of these we planted in a properly prepared trench by the ordinary method of covering all but the top bud; the remaining five we planted by the new method, side by side with the others. Today we examined them, and find only two of the five planted on the old plan alive, having matured wood about three inches in length. Their growth has been several inches more, but it has not ripened. All of those planted on the French plan have lived, and a remarkable difference is presented by their appearance, having ripened fully two feet of strong, stout wood. We find that the cuttings have only rooted at the but end, and three new shoots invariably spring from the last eye which is exposed—that portion of the vine above this has decayed, and in two instances has entirely disappeared. The rationale of this plan is, that it prevents evaporation through the pores of the vine cutting, and thus secures an abundance of nutrition to the young shoots, which, in our experience, has been abundantly evidenced by their superior growth. The Lenoir is a long-jointed, native grape, and one of the most difficult to strike from cuttings. As all the native grapes are more difficult to strike than foreign varieties, which root readily, we are of the opinion this plan would prove most successful with them, and intend to prosecute our experiment still further. We may add interest by saying that we struck cuttings by the same plan from Reine Claude de Bavay and General Hand plums. Upon examination, they were abundantly rooted, and made a growth of from fifteen to twenty inches.—Might not many of our fruits be propagated in the same way?—*Southern Agriculturist.*

## Transactions.

### THE CINCINNATI HORTICULTURAL SOCIETY.

MEETINGS of this Society during the past month have been possessed of interest in the discussions and in the exhibition of fruit, but the display of flowers has been exceedingly meager, owing no doubt, rather to a press of business among our plant-growers at this busy season, than to a deficiency of interest in the society.

Among the subjects attracting much attention, was a revival of the strawberry question, growing out of a communication to the Society by N. Longworth, in which he adverted to a report read at the Pennsylvania Horticultural Society, by Thomas Meehan, in which it was represented that a pistillate strawberry had been changed to a staminate by means of forcing. This subject had already been discussed by my correspondent DUSTER, (see p. 153,) to which the reader is referred, as there is not now space to report the Society's discussion, which was concluded by the following resolution offered by A. H. Ernst: Moved, that this society hold that experience has only confirmed their previously established opinions as to the permanent character of a pistillate strawberry, as given to the world in their report of 1846, and, without denying the possibility of the change reported by Mr. Meehan, of Hovey's seedling from pistillate to staminate, they deem it highly improbable, and would rather refer it to accidental mistake in the variety forced.

#### Hamilton County Agricultural Society.

THIS ancient county, in which we have the honor to reside, appears unwilling longer to be considered a mere adjunct of Cincinnati, but has wisely set up for herself as a County Agricultural Society under the general law of the state. In former times the meetings of the original Agricultural Society were noted as among the best in the state; my own first introduction to the farmers of the West was at Cumminsville, in 1829, upon the place since beautifully ornamented by Jacob Hoffner. Our youthful society is

in good hands, and promises to advance the cause for which it was instituted. A handsome premium list has been adopted, and has been early presented to the citizens of the county in a neat pamphlet form, making the prettiest and most attractively ornamented schedule which I have seen. The annual meeting was held at Carthage, on April 11th.

#### Pennsylvania Horticultural Society.

To some kind friend, probably the Secretary of this distinguished society, I am indebted for an advance slip of the proceedings of the meeting held on the 19th of April, containing an *ad interim* report of the fruit committee, from which it appears not only that the said committee are very energetic, but also that they have many subjects which claim their attention; several new fruits of high character have been presented, an extended notice of which is withheld at this time for want of room.

#### Vermont State Agricultural Society.

*President*—Fred. Holbrook.

*Vice-Presidents*—H. B. Stacey and E. Hammond.

*Corresponding Secretary*—J. A. Beckwith.

*Recording Secretary*—Luther Cross.

*Treasurer*—John Spalding.

*Auditor*—E. P. Walton.

*Superintendent*—Lyman P. White.

The exhibition will open on September 13th, and will be held in a large inclosure of forty acres.

#### The Mobile Horticultural Society

HAVE determined to hold a fair in May. It is hoped they will be amply supported in their efforts. Mr. Peabody has given the good folks quite a spur by his eloquent address upon this subject, delivered during his recent visit. They hold a regular meeting on the first Thursday of every month. The institution appears to be in excellent hands.

**Agricultural Society in Iowa.**

A call has been made at Mangoketa, Jackson county, Iowa, for a meeting to form an Agricultural Society. The *Republic*, in which we find the above, is apparently edited by a philosopher, for he says:

"Let the farmer consider the organization of a society in the light of a cheap and useful means to develop scientific knowledge in a simple and instructive way. The heaviest tax we pay is to *ignorance*; it burdens us in every department of life. Like the frogs of Egypt, it comes up even to our kneading troughs. We complain of our heavy taxes for lands, and for the various useful arts of government—both directly and indirectly, we pay more for our errors,

failures, visions, vices and a large share of disappointed hopes, than we do for all these ten times multiplied."

**Cayuga County Horticultural Society.**

THE Cayuga County Horticultural Society held its first annual meeting at the courthouse in the city of Auburn, on the 9th of February. The following named persons were duly elected officers of this society:

*President*—H. T. Dickson.

*Vice-Presidents*—P. R. Freeoff, George E. Barber, John Morse, Oliver W. Wheeler.

*Corresponding Secretary*—Horace T. Cook.

*Recording Secretary*—S. S. Graves.

*Treasurer*—John S. Clary.

## Editorial Notices.

## ACKNOWLEDGMENTS.

*Patent Office Seeds.*—A fine, plump package of Patent Office seeds, containing the usual assortment, has been received from R. S. Weightman, acting commissioner in that department, to whom thanks are due. Why has no copy of the Reports reached this office?

*Potato Seeds.*—To the persevering Chauncey E. Goodrich, of Utica, New York, for a package of his valuable rare varieties, I return sincere thanks, and hope therefrom to raise something worthy of note. Would that cultivators everywhere were disposed to aid this excellent man in his laudable undertaking. The labor is too great for one individual, and should be divided. He selects the seed with great care from his best varieties, and furnishes them and tubers at a very reasonable rate.

*Evergreens.*—From Evergreen Nursery, Woodbury, New Jersey, I am in receipt of a box of choice evergreens, that have arrived in beautiful order, and are indeed an ad-

mirable specimen of judicious packing, in which the great desideratum has been attained, of giving air to the tops, and preserving the roots moist.

*Grafts.*—Grafts of choice apples have been thankfully received from several kind friends, among them are the Cooper, from W. F. English; the Fulton, from C. R. Overman; Richards, from E. G. Studley, of Claverack, New York, and others.

*Roses.*—My gardener friends, in the vicinity of the city, have favored me with beautiful contributions of flowers and flowering plants. The bouquets from Pfeiffer, Heaver and Sayers, were agreeable visitors; while the lovely roses from Kelley & Co., and T. Knott, were most welcome, bringing to the darkened chamber to which I was confined by pain and sickness, breathings of the coming spring.

*Cold Grapery.*—Mr. Chorlton's book has been received by mail, and is a highly valued gift, with which I am well pleased.

## Items.

*Acclimation.*—The April number of the *Southern Cultivator* contains an article upon this subject by one very sensible "Plebs," who claims to have had twenty years' experience in planting trees, both northern and southern grown. He says: "Fruit trees, in my humble opinion, in many respects resemble men; some are good in other places, and prove good here when at a proper age. Some never prove good here. Some kinds of fruit are good on one soil and not good on another, not because they were *grown* here or elsewhere." "I am unwilling to see my friends and neighbors pay two prices to any man on the flimsy pretense of *acclimation*."

The editor's remarks are sensible, that young trees and trained with *low heads*, will better withstand the long summers than large, tall, spindling trees, suddenly transplanted from crowded nurseries. Yes, and this is equally true in the north in the orchard, and in either latitude, whether the trees are northern or southern grown. It is the low heads and shaded stems that constitute the best *acclimation* in either place; but our northern nurserymen can not afford to grow trees in this way, because purchasers, and especially southern purchasers, desire "large trees." Allow me to suggest, *en passant*, the use of *introduced* instead of the mystic *acclimated*—will it take?

*Ohio Pomological Society.*—The report of the January meeting has just been published at the *Cultivator* office, and issued to all members by M. B. Bateham, Treasurer, who will forward a copy, postage paid, to any one who will send him 25 cents.

*Ohio State Agricultural Report.*—As it appears from the *Ohio Cultivator*, of March 1st, has only just gone into the hands of the printer. This is truly unfortunate for the interests of the farmer. The subject matter, though valuable as a record, loses its inter-

est and importance by long delay. When it may be delivered from the press and the binder it is impossible to say; but perhaps this is of little consequence, as the legislature has adjourned, and we are not aware of any other mode of distribution but by its members.

*Model Farms.*—The Board of Agriculture of Maine has under discussion the establishment of a model state farm or farms, township clubs, agricultural instruction in schools, a geological and agricultural survey of the state, and other subjects of like importance. —Brother Holmes, of the *Maine Farmer*, has long been what we call a "wheel-horse" in agriculture, and is now an active member of the board, which is sufficient guaranty that something will come of it.

*The Prairie Farmer* says: A bill has passed the Senate of Michigan, appropriating \$10,000 from the general funds for the purpose of establishing a model farm at Lansing, for the improvement of the science of agriculture.

*The Pennsylvania State Board* have also been recommending a model farm and agricultural college. In Virginia the same spirit is moving, as noticed in the papers.

The progress of New York and Michigan has been noted. Illinois has a fair prospect of success in her industrial institution.

*Annual Address.*—The *Indiana Farmer* states that Horace Greeley, of New York, has accepted the invitation of the State Board to deliver the address at the next Indiana State Fair.

*Fruit Stealing.*—Several suggestions have been made in the agricultural papers, as to the best method of correcting this evil. Poison, traps, dogs, and Osage orange have been severally recommended, all of which have proved nugatory in supplying the defect of our laws upon this subject. Arthur Bryant, of Princeton, Illinois, has prepared

an excellent and interesting memorial to the legislature of that state, praying for statutory provision against this crime. This is a good suggestion, which is recommended to associations of fruit growers, horticulturists, and others interested.

*Vermont State Agricultural Society.*—A large sheet or bill, has been received, containing the announcement of the third Annual Fair of this society, to be held at Montpelier, on 13th to 15th of September next. The premium list is highly creditable and comprehensive, embracing awards to all varieties of farm stock, and products, besides those for essays on important subjects. All persons from other sections of the country are recommended to attend this fair, if they wish to see a genuine New England cattle show. Arrangements have already been made, and are still in progress with the railroad and steam-boat companies, for reduction in fare.

*Southern Trees and Shrubs.*—I am glad to see attention directed to the subject of the beautiful native productions of the south, by Wm. De F. Holly, in a racy communication to the *Southern Cultivator*. Truly, there are very many of our native shrubs and trees that are well worthy of culture, and vastly superior to the majority of those that have been introduced from abroad, especially by the missionaries pretending to come from the *Royal Society, Horticulture de France*.

*Vive la Bagatelle.*—Cincinnati as well as Mobile has become a center of attraction to "*these Greeks*." We have an annual visit from one or more of les Messires Français, who, by the by, don't generally succeed very well; and now, in addition, Yankee enterprise is entering the field of competition. We have daily exposed in our flower market and offered for sale, the celebrated Mammoth Alpine strawberry, an idea which ex-

ploded three years ago. Strange fancy that, for a shrewd American to visit Cincinnati for the purpose of selling strawberry plants—why! it is almost as good a joke as carrying fossil carbon to the mines of Newcastle. Our gardeners are too well informed to be misled, though some of the magnates may be simple enough to patronize Mr. Newland in consequence of his abundant certificates. —Next comes Needham's white blackberry, all the way from Danvers, Massachusetts, producing two spires from each bud, that bear fifty berries! Prime cost 30 dollars a hundred, five dollars per dozen, or two plants for one dollar. It is but just to Mr. Needham to add that he allows others than himself to puff his wares. It is hardly possible to conceive that the world considers a white blackberry a new thing, since it has been long known as a common wild plant in western Pennsylvania, Kentucky, and elsewhere.

*The Emperor's Marriage.*—While all the periodicals of the day, both great and small, have been filled with details of the great wedding, a horticultural fragment has fallen to my share. It is related that at one of the bridal balls 25,000 dollars was paid for flowers to decorate the halls and saloons—hurrah for the gardeners and florists!

#### The Working Farmer.

THE March Number of this sterling periodical is the first of the fifth volume. In his salutatory, the editor reminds his readers of the valuable series of articles printed in previous volumes—"The Course of Scientific Reading," "The Vegetable Garden," "Manures," etc., "from which," he adds, "those who possess our first four volumes have now a general work on agriculture, fully posted up with the day, as well as a special work on the vegetable garden and on manures. . . . In our present

volume, we shall introduce several series of articles on subjects not before fully treated; among these, will be a series on fruit and fruit trees, on sugar, cotton, rice, tobacco, and other Southern products."

It is sincerely hoped that so valuable a work will not be overlooked by those for whose especial benefit it is prepared—the farmers of the United States, to whom it is presented for the low price of one dollar a year, a most valuable agricultural periodical.

#### Soil of the South.

THE congratulations of southern agricultural readers are certainly due to Mr. J. M. Chambers, the agricultural, and to Mr. C. A. Peabody, the horticultural, editors of the *Soil of the South*, a monthly periodical, which, as they well know, has been ably conducted, and regularly issued from the office in Columbus, Ga., but which with the present year and the third volume, has been vastly improved in its typographical appearance and material, while its form has been changed from a loose quarto to a neat little octavo of 32 pages.

The horticultural editor, in noticing my allusion to the Southern Congress of Agriculture, to be held in Montgomery, Alabama, on the first Monday of May next, printed in the February No. of the *Review*, most kindly, and with true southern hospitality, takes occasion to tender me an earnest invitation to visit the Fair of the Southern Central Agricultural Society, which is to be held in Augusta, Ga., on the 17th—20th of October next. In consideration of his politeness, of the many noble spirits with whom I wish to meet, on account of friendship already formed, and for the sake of receiving a "welcome from ten thousand chivalrous hearts," even so retiring a citizen as myself will be prompted to make an effort to attend that meeting, if it can possi-

bly be accomplished. Besides, the agreeable editors of southern periodicals in that and the adjoining states, have greatly stimulated my desire to to meet them and their countrymen face to face, upon their own attractive territory.

In the uncertain future, however, and surrounded by various pressing engagements, I dare not promise myself that cherished pleasure.

"So, I winna say nay,  
But shall come if I may."

#### Farm Journal.

THIS substantial periodical from the Keystone State, has just closed its second volume. During the two years that it has presented itself to the agricultural public of Pennsylvania, it has proved a very valuable medium of communication between the farmers and the farmers' friends, and in that capacity has diffused much valuable information. Scientific agriculture and practical farming have here been introduced to one another, and under the direction of its distinguished editors, J. L. Darlington and A. M. Spangler, we may confidently assert, that it will continue to be a useful periodical for the agricultural population, and we earnestly hope that it will be appreciated; for Pennsylvania has the honor of having been the first one of the states to move in the matter of scientific agriculture.

#### Annals of Science.

THIS valuable semi-monthly periodical continues to make its regular visits, and is always welcomed by those interested in its well prepared scientific pages. May they be many.

The Number for March 1st, contains the first of a series of papers upon the Fossil Plants of Ohio. This is an ancient garden, or rather, herbarium, in which the energy

of Dr. J. S. Newberry has made many interesting discoveries. His collections are extended in this as in other departments of paleontology, and will be examined with great interest by the members of the Scientific Association, which will probably meet in Cleveland, in June or July of this year.

#### The Florist.

THIS Horticultural journal, which has been previously noticed with favor in these pages, continues to be issued monthly from Philadelphia. The second volume, which commenced in January last, is edited by H. C. Hanson, who in his introductory congee promises to use his utmost exertions to deserve approval. He says, with force, the advantages of Philadelphia as a site for a horticultural periodical, in its extensive and numerous gardens, the taste and liberality of its many amateurs, the intelligence and number of its cultivators, with the enterprise and energy of both classes in the introduction of new plants, and more than all in the extensive and valuable libraries both public and private.

The first number of this volume is illustrated by a beautiful lithograph of a new Camellia, Mrs. Cope. This is a class of flowers, in the cultivation of which the Philadelphia nurserymen have become celebrated. The Mrs. Cope is a seedling raised by Mr. John Sherwood; it is white, striped with a delicate blush, of good form, much in the style of the Duchess of Orleans, of which it is likely to become a rival. The second number contains a good representation of the *Achimenes longiflora alba*, which I saw blooming in Philadelphia last autumn.

The Florist is a welcome visitor, the determination of its editor entitles it to success, and the professed advantages of Philadelphia are real. May prosperity attend its path. Octavo, 32 pages monthly; two dol-

lars a year, payable in advance—twenty-five cents a number.

#### The Cold Grapery.

THIS excellent, practical little book has just been received from the author, to whose kindness I acknowledge myself indebted. Mr. Chorlton is well known to the horticulturists of our country as an agreeable writer and as a most practical cultivator. He claims to have given us here "an account drawn from direct American practice, being a concise and detailed treatise on the cultivation of the exotic grape-vine under glass, without artificial heat." From previous knowledge of Mr. Chorlton's writings, I do not hesitate to recommend this manual, which has, unfortunately, arrived too late for a more extended notice in this number. The appearance of the work is highly creditable to the publisher, J. C. Riker, New York.

#### Nursery Catalogues.

NEW supplies of these interesting documents are flying upon the wings of the mails and read in every hamlet. They are convenient means of informing purchasers of the whereabouts of the venders, and exceedingly useful to the beginner and even proficient planter, to aid in making selections—To editors, of course, they are intensely interesting. A large number of them has been collected, by aggregation, in my sanctum, and shall now be dismissed with a formal congee, and my thanks to those who so thoughtfully addressed them hitherward.

Fruit and Ornamental Trees, Shrubs and Plants—cultivated and for sale by Hubbard & Davis, at the Detroit Horticultural Garden. 36 pages.

Another bright-looking pamphlet, with a portrait of the Baldwin apple. This place I have visited and admired. The proprietors appear to be the right sort of men, and devoted pomologists.

Fruit and Ornamental Trees, Shrubs, Vines and Roses, Green-house and Stove Plants—at the Commercial Garden and Nursery of Parsons & Co., Flushing, Long Island. 64 pages.

Quite a neat pamphlet, in which some excellent advice is given to purchasers—especially to send orders early, and when convenient to leave selection to the proprietors. They are among the best judges of fruits, and may be safely trusted.

Catalogue of new and rare Exotic Plants—cultivated at the establishment of J. Linden, at Brussels. Price-current for 1853. 36 pages.

This embraces extensive lists of plants, and is quite a book of reference.

Kinney & Hakes' Fruit Trees, Hedge Plants, Sweet Potato Plants, Garden Seeds, etc.—at Rock Island, Illinois.

Their terms are admirable, and characteristic of the West—"pay down."

Agricultural and Horticultural Implements, Field and Garden Seeds, and Fertilizers—by G. H. Barr & Co., North River Agricultural Warehouse, 53 Cortland street, New York.

This pamphlet makes, indeed, a parade worth a trip to New York; it must be a perfect show, almost equal to a state fair, without the cattle and horses, the noise and the dust.

Highland Nurseries—Syracuse, New York.

Phelps & Putnam, Fruit and Ornamental Trees, Vines and Shrubs—think their elevated situation gives them great advantages in securing hardy and well matured growth of their products.

#### Potato Rot.

A Mr. E. ROBERTS, of Michigan, claims to have discovered the cause and cure of this disease. I suppose he is aware that he has a rival in the Rev. Mr. Corey, of northern Indiana. Whether there be any similarity in the methods or not, remains to be shown by future developments; herein, however, we may trace a great similitude—both claim to be modest, retiring, poor men, who have

made a great discovery, which is to benefit mankind at large—both claim that for this benefit they should be properly remunerated—in other words, both claim to be paid for their *secret*, and both present an array of names as vouchers for the success of their plans. A cotemporary, however, in referring to this subject, well remarks, "His greatest reward, in our opinion, would be in making known his theory, and claiming from all the world the gratitude which he would be sure to receive, if it proved worth a thank-ye to cultivators. Another, after a long preamble, sums up—"Those to whom the secret has been imparted, are at once convinced of its reality, so natural and harmonious is it with the nature of things." [!]

#### Chrysanthemums.

A new and superior method of propagation is cited by the American Gardener's Chronicle, from "*a London Amateur Florist*."—Having tried the plan, I recommend it highly for amateur cultivators.

"The plants were from half a-yard to two feet high, each having from four to six upright shoots well furnished with flower-buds, and clothed with foliage down to the rims of their pots, and in the best health. Struck with the beauty of their growth, I was told by the manager that old plants had been turned into the open ground in spring, where the branches could be spread at length, regularly around. In June, or early in July, 48-sized pots were plunged to the rim around the plants, near to the ends of the shoots, and one shoot was layered into each separate pot. As soon as it was perceived they had struck root, the top of the shoot was cut off, leaving the stem from four to six inches high; this stopping caused the production of side shoots, which were duly secured to sticks, so as to have them grow erect. When the plants had got well



furnished with flower-buds, they were cut from the parent plant, and then introduced into the house to bloom. Such uniform, handsome grown specimens, and so admirably supplied with flower-buds, I never saw before."—*American Gardener's Chron.*

#### Memphis grown Oranges and Lemons.

THE Memphis Eagle gives us this information :

Some weeks ago we inserted a paragraph, acknowledging the receipt of a basket of fine oranges and lemons, which had been sent us by Dr. S. M. Wheaton, and were the products of his garden in the suburbs of this city. We have just received a letter from a horticulturist at Cincinnati, inquiring if this fruit was "grown and ripened in the open ground, and without protection; or, if with protection, how long and of what kind?" Our friend, Dr. Wheaton, of whom we have just made inquiry, states in reply, that the oranges and lemons sent us, were "grown in the open ground," and that the trees are only protected during the severe winter months, by a covering of straw. There is no mistake about the quality of the fruit. The oranges were the sweetest we ever tasted, and the lemons were the largest we ever saw anywhere.

#### Another World's Fair.

A LATE arrival from Europe brings the following relative to an Exhibition of the industry of all nations in 1855.

"There is but one decree this week of trans-Atlantic interest. It ordains that a Universal Exhibition shall open on the 1st of May, 1855, in the Palace of Industry, now in course of construction on the Champs Elysees. The products of all nations will be received. The quinquennial exhibition of the agricultural and manufactured products of France, which was properly to be

opened in 1854, is adjourned to 1855, and to be united with the World's Fair of that date."

The French people in one thing have acted more wisely than did ours. They have taken time, and will be in two years fully prepared to make a respectable demonstration.

The great mistake relative to the New York World's Fair, was in holding it a year too soon. But in this it only exemplifies the character and habits of the American people.

We confess to a growing faith in the utility and respectability of the World's Fair, in New York. And now that it is to be held, we trust no exertions will be spared to make it respectable.—*N. Y. Farmer.*

This is more encouraging than some editors have led us to anticipate, but it is feared that the doors can not be opened so early as May.

#### Japan Pea.

DR. WARDER:—When I introduced the "Japan Pea" to the Horticultural Society of this city, in November, 1851, I advised its being planted about a foot apart in the row, and the rows about two feet apart. Your last number of the Horticultural Review (for April) recommends planting "four feet each way." This makes a great waste of ground, and the error should be corrected. Perhaps eighteen inches apart in rows two or three feet apart, is the proper distance. I did not recommend this pea "as a food for stock," but for domestic winter use. As a pea for summer use, it is not suitable. It requires the full length of our season to ripen, and flourishes under great heat and drought. This "pea," so called—in fact a bean—is self-supported by a remarkably hard, wood-like stem, about three feet high. It is very productive.

JOHN LEE.

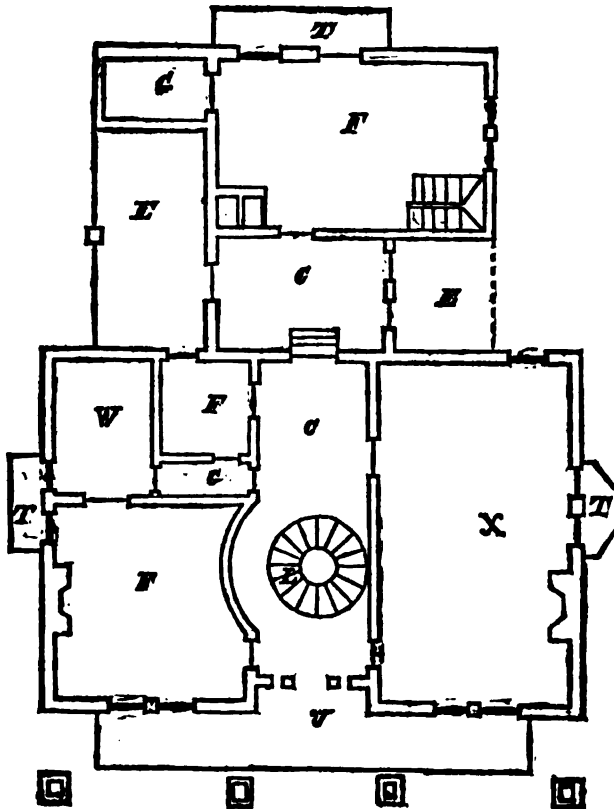
April 20, 1853.

## THE FRONTISPIECE,

Is an improved engraving of the house-plan, for which a premium was awarded to Mr. J. T. Smith, at the late Indiana State Fair.

It is very desirable that architecture should receive more attention in our new country, and as the log cabins are passing away, it is well that the executive committee should award premiums, and that the Indiana Farmer, to whom I am indebted for these engravings, should present to its

readers judicious plans to guide them in their prospective improvements. The design of Mr. Smith is compact and comprehensive, though open to criticism; every gardener will at once see that his conservatory is not sufficiently lighted. The main building is 45 by 39 feet, which will give ample space for a large family. The style is peculiar, and may be called American; it is neither Grecian nor Italian. The explanations of the engraving are given below.



PLAN OF SECOND STORY.

A, Parlor—16 by 16 feet; B, Sitting-room—16 by 16 feet; CCC, Hall—9½ by 16 feet; D, Dining-room—13½ by 22 feet; EEE, Porticos and Porches; FFF, Bedrooms; GGGGG, Wardrobes; H, Kitchen; I, Wood-house; J, Meat-room; K, Meal-room; LLL, Stairways; M, Conservatory; N, Family Bedroom; O, Bay Window; P, Pantry; R, Bath-room; SSSSSS, Chimneys; TTT, Balconies; U, Veranda; WW, Dressing-room; X, Drawing-room.

**Summer Harvey Apples.**

THIS fruit was grafted into my father's orchard, in New Hampshire, by a man from Springfield, Vermont, about 30 years since. Where it originated I can not tell, but as it was a great favorite, I brought the cions and introduced it here about 10 years ago. It was bearing in Troy, the third year after grafting, and I had a few apples of it here last season. The fruit has been much admired by all who have tasted it. The tree is very hardy, not a fast grower, forms a spreading, bushy top, branches slender,

and peculiarly hard and wiry, bears very young. Fruit large, light green, sometimes beautifully shaded with a light yellowish red tinge, somewhat mottled, nearly ovate, approaching to round, very juicy, agreeable, slightly acid; ripe about the middle of August, a constant and abundant bearer. I consider it the best apple of its season, for this climate. I have not found it described in any catalogue east, and have only seen the fruit as above.

A. C. HUBBARD.

—*Farmer's Companion.*

**METEOROLOGICAL TABLE.**

CINCINNATI, MARCH, 1853.

THERMOM.		WEATHER.			RAIN.	SNOW.	Date.	WINDS, etc.
Date.	Min.	Max.	Sunrise.	Noon.	Sunset.			
1	42	44	cloudy ....	cloudy ..	variable ..	....	....	1 Light NW.; brisk W.
2	35	39	clear ....	clear ....	clear ....	....	....	2 Light W.; brisk W.; light NW.
3	27	36	do. ....	do. ....	do. ....	....	....	3 Light NW.; high W.
4	25	30	snow ....	variable.	variable..	....	20	4 Brisk W.; light W.
5	21	35	fog, clear.	clear ....	clear ....	....	....	5 Calm; light N.; calm at eve.
6	26	40	clear ....	do. ....	driz. sn'w	15	....	6 Calm; light SW.; calm at eve.
7	33	66	do. ....	do. ....	clear ....	....	....	7 Light S.; brisk S.
8	43	46	fog, rain ..	rain ....	rain ....	74	....	8 Light NE and E.
9	37	40	cloudy ....	clear ....	cloudy ..	....	....	9 Brisk NW.; light N.
10	35	40	do. ....	cloudy ..	cl'y, rain	43	....	10 Light NE.
11	34	39	do. ....	do. ....	cl'y, rain	10	....	11 Light NE.
12	39	48	do. ....	do. ....	cloudy ..	....	....	12 Calm.
13	39	44	variable ..	clear ....	clear ....	....	....	13 Light W.; calm at eve.
14	28	39	clear ....	do. ....	do. ....	....	....	14 Light NW.; brisk NW.
15	19	32	do. ....	do. ....	do. ....	....	....	15 Light N.; light W.; calm at night.
16	24	48	do. ....	do. ....	do. ....	....	....	16 Calm; Light SE.
17	40	57	variable ..	cloudy ..	cl'y, rain	13	....	17 Light S. and SW. and variable.
18	49	50	do. ....	variable.	clear ....	....	....	18 Brisk SW. and W.
19	34	59	fog, clear .	clear ....	do. ....	....	....	19 Calm; calm.
20	42	56	fog, cloudy	variable.	rain ....	....	....	20 Calm; light S.
21	50	57	cloudy ....	cloudy ..	cloudy ..	16	....	21 Calm; light SW.
22	39	58	fog, clear .	clear ....	clear ....	....	....	22 Light W.; calm; light NW.
23	40	46	clear ....	variable.	var. snow	....	25	23 Light W.; high W.; calm at night.
24	30	51	do. ....	clear ....	clear ....	....	....	24 Calm; light W. and SW.
25	35	74	do. ....	do. ....	do. ....	....	....	25 Light SE.; brisk S.; high SW.; light S.
26	47	55	rain ....	variable.	variable.	38	....	26 Light S.; brisk SW.; high W. [Martins.
27	39	50	clear ....	clear ....	clear ....	....	....	27 Light W.; calm at eve.
28	36	50	do. ....	do. ....	do. ....	....	....	28 Calm; light NW. and W.
29	32	61	do. ....	do. ....	variable ..	....	....	29 Calm; light E. and S.
30	54	73	cloudy ....	do. ....	clear ....	....	....	30 Light SW.
31	53	77	ar ....	variable.	do. ....	....	....	31 Light S.; brisk SW.; high SW.; light SW.
Rain and snow water, inches,							2.09	45
Mean temperature of the month,							43.01	13
do. do. March, 1852,							47.89	13
do. do. do. 1851,							47.97	5
do. do. do. 1850,							42.12	
do. do. do. 1849,							49.90	
do. do. do. 1848,							44.12	
do. do. do. 1847,							41.23	
do. do. do. 1846,							47.69	
do. do. do. 1845,							47.00	
do. do. of all the above,							45.66	
Lowest temperature,							19.00	
Highest temperature,							77.00	
Range,							58.00	

This month has been unusually dry, only about half the usual quantity of rain having fallen. The mean temperature is about two and a half degrees below the mean of the last nine years. The Equinoctial period passed over with rather more wind than is usual here, yet not amounting to a storm in intensity.

JOHN LEA.

*Range of Thermometer during the Year 1852, according to Observations made by B. WARD, in Jo Davies County, Illinois.*

[illegible]

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THE HOUSE OF THE FUTURE



VOL. III.

JUNE, 1853.

No. 9.

## Vegetable Physiology.

### "THE ACCLIMATION QUESTION."

DR. J. A. WARDER :—Being desirous to keep alive in your columns the discussion of the "acclimation" question, (a subject full of interest to every Western cultivator,) I propose to contribute as matter not irrelevant a few facts picked up in the course of an experience now somewhat long, and a few others gleaned from weather statistics politely furnished by the Smithsonian Institute, and from personal observations made during a short tour last fall through some of the Atlantic states. In the present number, my purpose is to speak chiefly of the two cold spells of January and March, 1852. But how shall I begin? From whose treatise on the "cold-storm" shall I borrow the terms necessary to describe a "cold-storm?" where find definitions for "general cold," or "local cold?"

Not to disturb the equanimity of natural philosophers, I promise, whenever they shall have acted, to modify any theory now set until it shall accord with their action in the premises by convention or otherwise. In the meantime I can not make progress without a theory, though it be crude and manu-

factured for the occasion. Whenever, as is generally known, an old book, or any material substance is carried rapidly backward and forward upon the hearth in front of a fire, keeping up a partial vacuum, the still air of the room will flow in to fill the vacuum; but, being started, it does not stop within the bounds of the vacuum—with a steady current it "blows the fire" as long as this alternate motion is kept up; and if this alternate motion could dash through space with the speed of the electric spark, so as to preserve this vacuum continuous, the influx of cold air would be continuous and uninterrupted; also, did that vacuum extend over the one-tenth of three thousand lines or throughout the whole of three thousand miles, gravity would set the air in motion; but, by a law of fluids, nothing could stop it until the air within the vacuum should acquire weight enough to resist the pressure of that rushing in, or until the calm of equal pressure was produced.

The air supporting the cloud of a rain or snow-storm is such a partial vacuum, and it has been pretty well established by the

observations of Espy and others, that, with regard to our winter storms, these clouds have their origin in the "Far West," from the Rocky mountains to the Mississippi Valley, moving thence sideways toward the Atlantic ocean, and reaching northward and southward an indefinite though often very great distance.

This current of cold air, moving in the wake of a general rain or snow-storm, is what is understood by the term "cold-storm." Sweeping over the plains, it takes up by absorption or conduction all the surface heat of the country, thereby producing "general cold."

The great cold and snow-storm of January, 1852, had its origin nearer the "Far West" than science has yet established her posts of observation, but on the morning of the 19th of January, even its most western line had advanced within the limits of observation; and, between the 38th and 42d parallels north latitude (which is all my statistics embrace) the line of the calm or of equal pressure, which is by consequence the line of greatest cold, reached from the vicinity of Princeton, Illinois, northward and southward along a course bearing somewhat east of north, or west of south. The eastern border of the cold current had then advanced beyond Marietta, Ohio—the cold line ranging, but not warmer than 24° below zero. The eastern one above zero, and the temperature at each point between had been lowered by a ratio somewhat proportionate to the time which had elapsed since the cold current first struck—thus, at Marietta, Ohio, the temperature was 4° above zero, at Cincinnati and Louisville—10°, at New Harmony, Indiana, -14°, and at Athens, Illinois, and Milwaukee, Wisconsin, 19° below zero.

But the period of greatest interest during this storm was from sunrise on the 19th to

sunrise on the 20th, while the calm line, or line of greatest cold, passing meridian after meridian, was gradually moving forward, extracting heat from the earth not only without the aid of radiation, but in defiance of the sun itself, then shining with bright skies; for soon after mid-day at some points the mercury was sinking, while all those places upon whose meridian the cold line was moving at the moment of sunrise on the morning of the 20th—a moment when the local heat had been wasted most by radiation—experienced a fall in temperature not heretofore recorded in the Ohio valley.

At 9 P. M., on the 19th, this cold line had passed New Harmony, Indiana, temperature -17°; at 11 to 12 it had reached Louisville, Kentucky, temperature -18°; at 5 A. M., on the 20th, it had passed Cincinnati, temperature -20°; and at 7½ A. M., had reached Zanesville, Ohio, extending southwardly through Kentucky in the direction of Frankfort and Flemingsburg.

Now, although in the transit of this storm from Princeton to Marietta, some places experienced greater degrees of cold than others—just as the radiative force, a chief cause for local cold, had in a higher or lower degree exerted its power in sending into space the local warmth; yet none (high hills and lake shores excepted) suffered a less degree of cold than about 17° below zero; and no place whatever was able to protect its peach crop, so far as I am informed.

In one of the paragraphs quoted from foreign authority in support of your editorial remarks, the following sound doctrine is contained; "Whatever renders tissue moist, increases its power of conducting heat and increases the susceptibility of plants to the influence of frost." This, I think, is true, whether the moisture be present on the outside, in the form of pearly drops or solid



sleet, or consists in a more abundant flow of the fluids of circulation ; and upon this principle only, I incline to believe, can we account for the heavier damage sustained by vegetable life between the 17th and 21st of March last, when the thermometer never was lower than  $11^{\circ}$  above zero, as compared with the injury in January preceding, when the mercury dropped to the low figures of from  $17^{\circ}$  to  $30^{\circ}$  below zero, but when vegetable life was at rest. At the January spell, only the peach and apriort buds were killed ; during that of March all fruit buds which had doffed their water-proof coating, and some varieties of the plum which had not, were destroyed—even the small branches of the hardy willow did not escape death.

This spell, like its precursor in January, was a regular "cold-storm," with electricity wrapped in the mantle of a rain-cloud for an "avant-courier," with its front and its rear lines, with it lighter-armed breezes in front, dashing briskly but fitfully along, while its rear was being brought up by currents moving under the ponderous pressure of icy coldness, each wave of which carried in its course death and destruction to whatever was not either proof against its temper or shielded from its touch.

In the able report upon the above question which, with a slight modification, was adopted by the Cincinnati Horticultural Society, the following doctrinal proposition is found, viz : "No tree or plant by removal ever undergoes a change by which it is capacitated to endure a more rigorous temperature than its original or native condition." This theoretical truth is acknowledged, I think, by more than a majority of the writers on vegetable physiology, and yet there are causes of confusion, which lead the same authorities to a lamentable want of unanimity as to what particular diseases befalling trees or plants thus removed result from the action

of extreme cold in winter, or of unseasonable cold in spring, and what result from other causes. For instance, the gooseberry is known to thrive well in England and some other countries of uniform temperature, but not succeeding here, where, upon the same isothermal line, it is both hotter in summer and colder in winter. There are as many advocates for mulching the grounds by way of protecting the plants against the evaporative and heating effects of a summer's sun, as there are those who believe cold to be the harm-producing agency, and look for protection under cover of some rampart, breaking the force of the rude blasts of winter—such as the east or north-east side of walls or fences. Again, there are certain beautiful evergreens, natives of mountain elevations and tropical districts, whose whole life is spent in a climate more uniform even than that of the sea-girt isles of Great Britain, enjoying in their native haunts, partly from the little difference in the length between night and day, and partly from the power which elevation has of lessening the ability of radiation to increase the temperature by day or to lessen it by night, a genial warmth not unlike perpetual spring. The foliage of such evergreens is browned even by a mild English winter ; yet such plants and trees are bought and sold under an impression that they may be successfully grown in any country whose mean annual temperature varies but little from that of their native habitat.

It has been ascertained by experiment that no vegetable substance, in a tender and succulent state, will resist greater cold than about seventeen degrees above the zero of Fahrenheit. Such a degree of cold will kill the tender and newly developed leaves and branches of hardy forest trees ; and it would seem to be the innate power that a variety possesses of recovering under a shock of this

sort, which entitles it to the epithet of "hardy" in any locality whose climate is fickle; and that the Heart Cherry and English Walnut are not tender in such localities, by reason of their inability to endure severe cold, to which, when the sap was still, they have been exposed again and again without harm, but simply because the large pith and thin alburnum of their small branches, or some other peculiarity, render these trees very susceptible to the action of cold when the sap is actively flowing. Thus, in March, 1852, when the thermometer sunk during the night to twelve or fourteen degrees above zero, all the buds and small branches of the hardy willow were killed. These trees, however, except on very low grounds, sent forth new shoots from the larger branches and recovered; but not so the English Walnut and Heart Cherry, then bursting into leaf and flower; most of them never rallied, but perished. I witnessed the death of a Walnut full fourteen inches in diameter.

As your readers are aware, I belong to that class of theorists who look upon these eccentric freaks of cold as the worst feature in our climate as a fruit country, and who consider no country *highly eligible* for fruit-growing, which has not at all times in store a stock of latent heat, capable of tempering down these blasts of cold thus straying out of season. My purpose in these papers is to lay before your readers the small modicum of evidence, positive and circumstantial, bearing upon the theory, collected in a short tour last autumn through what is termed the fruit district of the Union, "*par excellence*," the Atlantic states. The positive testimony was gleaned from weather statistics at Washington city, whereby it appears, that although on the 19th of January, 1852, there was an intense degree of cold near Princeton, Illinois, and along a line running somewhat north-east and south-west of that place,

while it was comparatively warm at all places lying 300 to 400 miles east of such line of intense cold; and, whereby, it also appears that said line of cold, during the twenty-four hours preceding the morning of the 20th of January, had moved eastward from the neighborhood of Princeton, Illinois, to that of Marietta, Ohio; said line running west of south through Kentucky and Tennessee, and preserving a sort of parallelism with its position on the morning of the 19th, while the cold in the same parallels of latitude seemed even more intense than that of the previous morning near Princeton. Yet, on the morning of the 21st, when the same cold wave, in its journey eastward, had crossed the mountains and reached the vicinity of the Atlantic, nowhere between Connecticut and North Carolina was the temperature as low by fifteen degrees as around Marietta, Ohio, on the morning before. The same remarks are substantially true of the cold storm of the 21st of March, 1852. It was disastrous here, but at the same time slightly injurious amid and east of the Alleghany mountains. I witnessed many facts affording circumstantial evidence of the same nature.

Thus, as proof that these unseasonable cold blasts never visit the cherry district, and that this fruit is never called on, along the hedges and fence rows, where it has become a native, "to endure the rigorous temperature" to which it is subjected in our climate, I may remark that the English Walnut flourishes here and bears freely. There is one tree in Virginia as large as four feet through. The Ivy, the Garden Box, and Holly grow most freely. The Acacia, with pink flowers, or the Georgia Locust, as it is there called, become a forest tree. The Paper Mulberry, which has given rise to the interesting discussion in your columns, finds a genial climate in Maryland and Virginia. I saw many

trees, of different sizes, all in perfect health; and near Port Royal, in Virginia, I saw a few specimens over two feet in diameter, tall and majestic forest trees.

In fine, I saw nothing but what favors the theory, that it is the latent heat resident in water, or floating in mid air around elevations, which "tempers the winds to the tender fruit." Even in this favored district the frost on the river bottoms, fifty miles from the sea, had done some injury, and I found the residents thought safety was upon the hills, or "nearer to salt water." The most abundant peach and plum crop I saw in Western New York was at Cayuga Bridge, upon a narrow body of land between two lakes; and the only continuous peach crop for 1852, in any neighborhood west of the mountains, was on Chestnut ridge, a less elevated parallel range, some eight hundred feet in height.

Want of familiarity with the subject prevents our realizing, in its full extent, the power exercised by the latent heat, and we should perhaps be startled if told, that on such an occasion, it equaled the force of a full-orbed meridian sun, shining with bright skies. And yet there are reasons for believing as much, and none more in point perhaps than the fact, that the cold storm of January, 1852, already referred to, in passing over Dr. Kirtland's, on the lake shore near Cleveland, Ohio, at an hour, on the morning of the 20th, when the sun exercised the least possible force, was able to sink the thermometer no lower than it had fallen on the previous noon of the 19th, on the same parallel of latitude, near Athens, Illinois, when the same cold wave was passing over that place, and the sun shining in the meridian with cloudless skies. L. YOUNG.

NOTE.—Always happy to gather words of experience from acute observers, the following extract is clipped from the Ohio Cul-

tivator, in which the writer appears fully conscious of the important influence of a lacustrine atmosphere, as illustrated in the severe cold of January, 1852,—referred to by Mr. Young—when the thermometer on Cayuga lake only fell 4° below 0, at the same time that it was -30° at Marietta, Ohio, [see pp. 291 and 295, vol. ii.] It should also be borne in mind, when considering Mr. Young's reference to Cleveland, Ohio, that Prof. Kirtland, upon that occasion, apologized for the diminished influence of Lake Erie, by stating that a strong south wind was blowing off the influence of the water:—ED.

Many years ago when I procured *Ribes sanguineum*, it was a set in a rich border; but I found it so tender as to require protection in winter. After trying it several years it was removed, and replanted where it was shaded by a high board fence, so that when frozen, the sunshine could not reach it; and there it has been perfectly hardy, blooming beautifully every year. I am in doubt, however, whether my success has been chiefly owing to the shade, to a thinner soil, or to a greater age—for both of the latter conditions have great influence over some other plants. A shrub that is stimulated to grow too late in the season to mature its wood, must be very hardy indeed to endure our winters undamaged. None of our forest trees could bear it, and therefore they quit growing in good time. But I have also found exotic shrubs which were tender when young, that became quite hardy as they grew more rigid, even when they stood in the same spot.

Some years ago, Dr. Hildreth, of Marietta, spoke of the advantage of planting some tender roses on the north side of buildings, so that sunshine should not thaw them. This precaution would be of less account in our region, where sharp, frosty nights followed immediately by bright sunshine, are so rare, especially in winter—the condensed vapor of our lakes generally forming over us a canopy in such mornings. But in the selection of all shrubs for this purpose they must be hardy enough to bear our severest cold in the shade. Both the Greville and Champney roses are too tender for such ex-

periments in this climate, unless the winters are unusually mild.

With much respect,  
GREATFIELD, N. Y., 4th mo., 1853.

D. T.

#### Circle of Dependencies.

IN answer to an inquiry by R. L. Pell, before the New York Farmer's Club, as to the restoration to the land of its fertility which is washed away by rivers, Prof. Mapes said: That the fertile portions of the continents are ever being carried to the ocean; nor is this confined to the soluble portions of inorganic substances only, for soluble portions of the organic parts of both vegetable and animal substances, are carried from continents by our large rivers and conducted to the sea, and if no means were provided for their return to the dry land, the earth would long since have been drained of its fertile portions.

The deltas of the Nile, of the Mississippi, and of many other rivers, show conclusively the immense amount that is daily carried in mechanical suspension in their waters, the heavier portions of which alone subside to form these deltas. The woodland estate below New Orleans, belonging to Mr. Johnson, of our city, was a few years since covered with water of sufficient depth to float the larger class of vessels. In addition to these deposits, the under-currents of these rivers are so imbued with these organic substances in mechanical suspension, as well as with the more soluble portions of the inorganic constituents of soil, that any substance falling into the river at or near New Orleans with sufficient force to enter this current, will never again rise, and the quantity thus propelled into the ocean each day, is one 365th part of the decay of vegetation, over a surface of millions of acres, added to which are the falling banks of rivers, bars removed by change of channel, animal excreta, etc., etc. That passing into the Gulf of Mexico, is subject to gradual dilution, separating by difference in specific gravity and various modifications of decay, these ultimates forming food for fish of different latitudes, and causing those fishing localities so well known on the coasts.

The cod are fed on the banks of Newfoundland, while the shad fatten south, and then travel to deposit their spawn where the

greater dilution of food is more appropriate for the use of their young. Large portions of these materials, washed from the continents, go to feed the *Algæ*, which, unlike many of the land plants, feed all over their surfaces, the principal office of their roots being to detain them in one particular spot, while their specific gravity being less than that of the surrounding water, causes them to maintain their upright position. When ripe, these *Algæ* undergo decay, and either in their perfect or organized forms furnish food for fishes, crustacea, and sea-animals. Many of the vegetable products of the ocean are used as food by birds, while others, in obedience to nature's laws, assume the kind of organism we notice, thus forming food for men and birds. Many of these birds are themselves food for man, while others deposit their excreta on the *Guano Islands*, and eventually contribute by the decay of their bodies to increase the bulk of these manurial deposits.

The large amount of *Algæ* and sea-grasses washed on the eastern shores of continents, is another source for the restoration to the land of its constituents from the sea. The uprisings noted by geologists, often present us with immense deposits of shells; and the greensand marls of New Jersey are filled with shark's teeth and other oceanic remains. The consumption of shell-fish is a prolific source of restoration from the ocean. The large consumption of fish, the amount of oil procured in the whale fisheries, seal fisheries, etc., all tend to restore in large quantities these proximates, albumen and gelatine, large quantities of carbon, phosphates, and all other constituents, which once or oftener occupied the land in other forms.

The burning of kelp, the making of muriatic acid and soda from sea-water, and various other chemical manufactures of which the products of the ocean form a part, are an active and immense means of restoration. The removal of the *Guano Islands* to the continents are now restoring the aggregations collected during a more sparse population of the earth, for the use of an increased and more busy throng. The nitrogenous portion of all matters carried to the oceans as it assumes a gaseous form from decomposition, enters nature's great storehouse, the atmosphere, and while being blown across the continents, this ammonia is brought down

by rains and dews, and is received and retained by the carbon and alumina of the soil, until nature in her economy shall again solidify and appropriate this *muscle-making* constituent.

It must not be supposed that the wash from the continents necessarily settles to the bottom of the ocean—for as each particle arrives at a depth where the pressure of the super-incumbent water renders its specific gravity the same as that of the suspended molecule, it will there float until by chemical change it becomes specifically lighter, and rises to such point as enables it to avail of the sun's influence, combined by absorption of gases by surface water, there yielding up its nitrogen, either in some proximate form as food for fish, or combined with hydrogen as ammonia, in which state it enters the atmosphere and makes glad the continent. All ammoniacal matters in volatile form, are readily and almost mechanically carried up by the evaporation of the ocean's surface. It has been clearly established that the amount evaporated from the surface of the Mediterranean alone would be sufficient, if recondensed over any one county of our state during twenty-four hours, to so deluge it as to denude the surface of every vestige of the handiwork of man. With this fact before us, it is not difficult to see why the giant mind of Leibig supposed the atmosphere to contain ammonia, nor for us, by his teachings, to understand how this ammonia is again deposited where most needed for the sustenance of man. This subject in its minutiae might be carried on for hours, and not without interest; but I think I have said enough to show that nature's laws in this, as in all else, are perfect, and that even the mighty ocean, obedient to her will, renders a just account of its stewardship to mother earth.

#### Colors of Flowers.

REMARKABLE changes take place in the color of some flowers during the course of the day. Those of the Pink Phlox, early in the morning are of a lightish blue, which alters as the day advances, and becomes a bright pink. The *Oenothera tetraflora* has white flowers, which change to red. The *Hibiscus variabilis* has its flowers white in the morning, pink at noon, and at sunset bright red. Many flowers of the *Boragina-*

*cea* are red before expansion, and afterward blue. The bracts of *Hakea Victoria* are yellowish white at the center the first year; the second year these become of a rich golden yellow; the third year rich orange; the fourth year blood red, and the green parts of the bracts become annually darker. *Hydrangea* changes its color between blue and pink. The *Dahlia*, of the yellow species, has been made to produce all varieties of that series, but has never been produced of a green color.—*Artisan*.

#### Fungi as useful Productions.

Nor only are Fungi despised as articles of diet, but as useful or even interesting productions they too usually either pass unnoticed, or are looked upon as objects the sight of which is rather to be shunned than sought after. Nor is this to be wondered at, when we allow ourselves to be guided by the prejudiced opinions of others, who, in most cases, have no real knowledge of the good or bad qualities of those things they are condemning. That such a large proportion of the whole vegetable kingdom should spring up (at two periods of the year when vegetation generally is most dormant) and flourish and decay without rendering man any service, appears to me unreasonable to expect; and that the same should be allowed to perish unemployed, year after year, I consider can not be too much regretted. In addition to the importance of Fungi as an article of diet, many might prove of great value for a variety of purposes, independent of their interest as objects of beauty and curiosity.

As medical remedies, we are well aware that many of the most active species, formerly in great repute, are now rejected and forgotten; but that many are employed at the present day by eminent members of the medical profession, and are considered to surpass some of the more modern discoveries which, in some instances, have taken their place.

The *Lycoperdons* are used for a variety of purposes, as stopping blood, which they do mechanically by means of their spores; and stupifying bees, which is done by the smoke arising from them when burnt. Also, as tinder they have been much used, and for this purpose are saturated with a solution of saltpeter and then dried. In northern coun-

tries, where the neighbors live far apart, they have been employed to convey fire from place to place. *Polyporus ignarius*, and *fomentarius*, are extensively employed in the manufactory of Amadou, which is used for the following purposes; for stanching blood; as a material for paper making; and steeped in saltpeter to form tinder; it is also made into dresses by the inhabitants of Francoind; is burnt by the Laplanders to protect their rein-deer from the attack of gad-flies; it is used for surgical pads; and when sliced and formed into extensive sheets, it has been employed largely by the medical profession to protect the backs, etc., of the bedridden invalids, as it is more elastic than chamois leather, and less likely to crumple. It has been considered far superior to many substances in more common use, also, for a compress over varicose veins, as it supports the distended vessels without pressing too tightly upon the limb. The Swedish peasantry use Amadou to alleviate pain as follows: Wherever they suffer pain, they bruise some of the dried Fungus or Amadou, and pulling it in pieces, put a small heap of it on the part nearest the seat of pain; it is then set fire to, and burning away it raises a blister on the skin; and although this may appear to some persons a rough method of treatment, it is generally a very successful one.

Salmasius describes the following method of making Amadou: The Fungus is to be first boiled, then beaten to pieces in a mortar, next hammered out to deprive it of its woody fibers, and lastly, being steeped in a solution of saltpeter, exposed to the sun to dry. (I should imagine that the saltpeter was omitted except when it was required for tinder.)

*Polyporus squamosus* forms a razor-strop superior to many patented ones in general use, when prepared as follows: Cut it fresh from the ash-tree, in autumn, when it has become dry and hard; flatten out and press for twenty-four hours, then slice longitudinally, and with a piece of pumice stone ground flat, rub to a level surface those strips which are free from the erosions of insects, which may now be glued upon a wooden stretcher, and when dry will be ready for use.

*Polyporus annosus* is reported by the Swedish peasantry to be a cure for snake-

bites. *Polyporus sulphureus* is employed in dyeing. *Tremula mesenterica* is reported to dye yellow. *Tremula fimbriata* has also been used in dyeing; and the Russians employ for dyeing those *Boleti* which change to blue or green color when cut. *Agaricus atramentarius*, and other deliquescent species, have been used in the manufacture of ink and dyes.

*Phallus foetidus* may be considered more as an object of interest than a useful production, from its quick growth and rapid decay. It passes through its ephemeral existence unnoticed; and probably the strong odor which it produces, which is far more offensive than putrid flesh, induces many to avoid rather than to seek by such a guide one of the greatest curiosities of the vegetable kingdom. Flies, snails, and slugs, are so fond of it as to flock to its resting place to regale themselves with the delicious food it affords; and had not provident nature supplied it with a root, which, like the potato, throws off offsets, it would soon become extinct. The offensive odor it produces is very great when diluted with the surrounding air, but hardly perceptible when brought in close contact with the nose, and in this manner it may be readily conveyed home for examination. The odor has induced some to believe that the taste is nauseous and highly poisonous. Those, however, who are bold enough, may eat them without fear; and it has been asserted, that the white stalk is rather agreeable than otherwise.—*F. Y. Brocas, in Col. Gard.*

#### Increase of Heat in Flowering.

BROGNIART observed the opening of the flower of the *Colocaria odora*. The spathe opened March 14th, the discharge of pollen commenced on the 16th, and continued until the 18th. The temperature he states to be as follows:—

March 14, 3 p. m.	4.5 degrees	centigrade	above the air.
do 15, 3	do 10.—	do	do
do 16, 5	do 10.2	do	do
do 17, 5	do 11.—	do	do
do 18, 11 6 A. M.	8.2	do	do
do 19, 10	do 2.5	do	do

Flowering usually takes place at a definite period of the existence of a plant. Annual plants are so exhausted by flowering as to die. But by retarding the epoch of flowering for two or more years, as by nipping off the flower buds, time is allowed for the as-

cumulation of sap; the stem, from being herbaceous, (that is, dying annually,) becomes shrubby, and sometimes, as in the tree Mignonette, they may be made to live and flower for many years.—*New York Farmer's Club.*



## The Garden.

### THE BEAUTIFUL IN HORTICULTURE.

THERE can be no doubt, in the minds of the initiated, that a page or two may be profitably devoted to a consideration of the beautiful in horticulture. The only question with us is, can we show the plain hard working farmer and mechanic, for whom we mainly write, that this theme is really one of great practical utility, in connection with the rational education of the young, and the purest enjoyments of the old?

The world is full of beauty—its elements pervade all nature, and its impress is on all the works of creation, where God has “breathed the breath of life.” From the simplest lichen to the noblest tree—from the insect to the man—in the water, on the earth, and through the air, the spirit of beauty is over all—eternal and divine.

The universal prevalence of beauty, is our best warrant for its utility in the economy of nature, and its uses in the moral perfection of the last work of the CREATOR—intellectual and responsible MAN.

But this consideration is above our capacity, and we leave it to the learned and pious theologians, where it more properly belongs, and confine our reflections and arguments to the general influences of the beautiful in nature and art.

Perhaps all perfect animals have some affection for the beautiful; and certainly the feeblest human intellects can, in some sort, feel pleasure in its presence. But a correct TASTE—a full and perfect appreciation of the principles of beauty—is the result of education; and our enjoyment of it grows with the extension of our knowledge, and the intimacy of our relations with the subject.

Where no specific education in the school of taste guides the learner, he has, nevertheless, his own ideas of the beautiful drawn from objects ever before him, and influences that surround him, and silently act upon the impressible mind. Depend upon it, there is great force in the wordless teachers that play a part in the education of the young; but more especially in the formation of a taste for the beautiful, and the moral refinement consequent thereon.

Those who have not been familiar with the true standards of taste will form their own opinions from the false, or the conventional and perverted tastes of those nearest to them. And here—

“A little learning is a dangerous thing;” for there is less appreciation of the beautiful, and worse taste displayed by those who have grown up in cities, where there is little

of the beautiful open to all, than you find in the country, without any conventional education to guide it.

*There is but one true standard of taste, and that is the NATURAL.* The perfect child of nature, and the most intellectual and cultivated artist, study the same models, and admire the same objects; and both have true taste, and both enjoy the beautiful in proportion to their knowledge of it. But while the one only enjoys, the other creates, by inspired or studied combinations of the natural; and thus adds to the general stock of the beautiful, while he increases his own capacities for its enjoyment.

The country is the true home of beauty, and horticulture is the free school of taste; in which all of our readers may become apt pupils if they choose, and gratified and useful professors if they will it; and help create as much beauty in their spare hours as the wealthy citizen can purchase with the gains of years, to decorate his brick and mortar palace, in the metropolis.

And which species of beauty will have the best effect in educating the young, and making pleasant homes, and moral and useful citizens? That which is only conventional, and therefore deemed essential in social life; or that which is natural, in its place, and which appreciative horticulture will give to a country home, at a hundredth part of the expense required for the show furniture and extrinsic decorations of a third-rate city mansion?

There is no mere ornament, in the house or out of it, so cheap and so tasteful as healthy plants and flowers; and you will find ten persons of sense admiring your Geranium or Fuchsia, where one will notice your rich curtains and tall mirrors. And outdoors the eye that would never be attracted by glaring paint, cornice, or column, will be instantly arrested by the living arabesque

of a native Creeper, or the umbrageous outline of an American tree.

To our city friends we admit an exception to this rule; not without weight in the country also. If you have been so fortunate as to secure a man of true taste as your architect, then, indeed, the artist may have given your house a pleasant or a beautiful countenance, on which one can look with as much delight as upon the work of nature—from which successful art always borrows its models.

And this, too, belongs to our department, by usage, and natural connection; and the effect of the beautiful in horticulture may be exalted or depressed, by the fitness and beauty, or ugliness and incongruity, which shape the shell of that most sacred spot on earth, called HOME, and which should ever be as pleasant to the eye, as it is sacred to the heart of every child of the soil, whether born to the noble heritage of labor, or the snares and cares of wealth and station.

Though a love of the beautiful is in some measure inherent to all the better specimens of human nature, yet it is very certain that this love might be infinitely increased, by the education which comes from the constant intercourse with things of beauty and excellence. And unfortunately it is equally true, that this inherent tendency may be entirely destroyed, or sadly perverted, by a constant association with the hard features of mere mechanical utility—the ugly barrenness of metropolitan poverty—or that worse influence which teaches that money making is the chief end of man, and that true enjoyment may be found in meretricious pleasures.

It has been shown by our best writers, that the families, where the beautiful things of the garden and lawn are substantially parts of home, are as a whole, most contented and happy, and best deserve to be so; and that the individuals of such families are



more apt to carry into separate life, all the good lessons taught them at home. Many such families are known to us, and we are yet to find the first one (other things being equal) where the principle does not hold good. And as to individuals, our experience is equally convincing, though perhaps not so singularly fortunate. But where in these we have seen traits of character the most reprehensible, an understratum of good was always laid bare, when the old objects of love were once again presented to the eye that had lost sight of them, in the whirl of dissipation, or the distractions of money getting. The influences of the beautiful in horticulture are all good, and the pleasures which come with its practice, leave no sense of satiety behind—no feeling of regret for the morrow.

Look around you, thoughtful readers, and answer candidly. Are we far wrong in our estimate of the salutary influences of ornamental horticulture? Do you not admire that simple little cottage, with its graceful trees, from our native woods; the vines, making beautiful, while they conceal the rough outbuildings—the little “front yard,” or more fitting lawn, gemmed with shrubbery and sparkling with flowers, with neat walks with a tinge of velvety turf, or natural ones over it—all in keeping—and all suited to the means of the tasteful owner? If you have been able to lift the veil that hides the life within, have you not found real comfort and true happiness there, and are not the inmates really deserving of what they enjoy?

And how much in time and money has all this cost? Perhaps less than a tithe of what your rich neighbor had expended to rear that great pile of boards and shingles, or more ambitious mountain of bricks and mortar, with a countenance as blank as an overgrown idiot's, and as barren of beauty

as a lumber-yard or a brick-kiln—and not a thing (except weeds in the grounds, or paint on the walls,) either greener or brighter than the man who can deem this huge abortion the *ne plus ultra* of architectural taste.

Ten to one he who built that dwelling, if a farmer, is one of those who “would rather have a hill of potatoes than a rose bush,” and would sooner raise a snarling cur, than plant a beautiful tree.

Dear readers, this essay of ours is not what we intended to write; and it is now too late to alter it. Yet there is matter for thought and practice in what we have said. Education begins in the cradle and ends only in the coffin; and things act on the mind with more force than words, especially in the young. Place, therefore, things of beauty and excellence before the young, and pure and rational enjoyments within their reach. Pleasure is necessary as pain is inevitable; then let us find our pleasures in that which elevates, and thereby escape that which debases, and may destroy. All love, or can learn to love, beautiful flowers and graceful trees. Plant them, then, and you will have abundant cause of self-gratulation hereafter.—J. A. Kennicott, in *Prai. Farmer*.

#### Vernal Flowers.

THE flower is generally the most tender part of the plant, and the exceptions are chiefly from Europe and Asia, where the winters are milder than ours. Among these are the snow-drop, the *eranthis*, and the cloth-of-gold crocus, which are now (3 mo. 17,) coming into bloom. For many days the ground has been frozen, yet these plants have thawed holes through it by pressing against the under side. I have just come in from the garden and found by pushing down a knife, that the soil, though soft at the surface, was still frozen hard around many of them at the depth of one or two inches. To

such weather as this they are admirably adapted, and the cold appears to affect the flowers no more than it does the leaves that rise with them.

The snow-drop is a bell, hanging its head with the patience of a martyr under a cloudy sky, and while the rude winds sweep around it; but to the first comfortable ray it spreads its petals, and seems to rejoice.

This species (*Galanthus nivalis*) is a native of Great Britain, and Loudon regrets "that no variations or hybrids have been produced from this early and pretty little flower." There is a double variety, however, which he has not noticed, but which is scarcely prettier than the single kind.

In 1818, according to that author, another species (*G. plicatus*) was introduced into England from the Crimea. It is distinguished from the common snow-drop by its plaited leaves; but like the other, its flowers are white, and perhaps not more desirable. I have not heard of its introduction into this country.

*Eranthis hyemalis*, called the Winter Aconite, is a native of Italy, but was introduced into Britain as early as 1597. The flowers are a light yellow, forming a contrast with the snow-drop, and blooming about the same time, though it belongs to a very different natural order. A correspondent of mine said he had seen *seven* acres of it in England, in one patch; but though it increases freely in my garden, I have not found it troublesome. The root is not a *bulb* but a *tuber*, and as the seeds soon ripen and the leaves die, it is a long time in the dormant state, when it might be safely transmitted to California or Oregon.

In 1829 Professor Lindley enumerated seventeen species of Crocus, of which the cloth-of-gold (*C. susianus*) is the earliest that I have seen. It seems rather to peep out of the earth at first, as if afraid of the

cold blasts of this fickle season. With the encouragement of warm sunshine, however, it grows bolder, and rises higher, though it is still classed with the shortest of its family. This genus has spread into many varieties.

A small bed in the garden would contain all that I have mentioned in sufficient numbers, together with a few others, soon to follow, and after our long winters, the eye that would not brighten, or the heart that would not glow on approaching them, is greatly to be pitied.

DAVID THOMAS.

The pure and kindly sentiment of this last paragraph has been more fully explained by our venerable friend and instructor, in his address before the Buffalo Horticultural Society in 1848. From that paper we quote as follows:

"Does any animal except man enjoy the *beauty* of flowers? I presume not, having never seen any indication of the kind. Our love of flowers must then be considered as evidence of a higher organization, and those who can not appreciate it, *suffering from the want of some phrenological development*, have claims on our sympathy. Yet as organs are said to be enlarged or diminished according to moral or mental training, so many of our friends, now shut out, may indulge the hope of rising hereafter to the enjoyment of more glorious objects, and of purer and more elevated pleasures."

There are great thoughts bound up in this simple language of an amateur who has seen well nigh eighty springs usher in "vernal flowers," and now watches their annual opening with more fervent delight than his practiced boyhood hailed their expected coming. The love of flowers never dies while our senses survive, but grows brighter when we have little else to look forward to, this side of the grave.—*Ed. Prairie Farmer.*

THE venerable Stuyvesant pear tree in New York city, is again in full bloom. It is about two hundred and thirty years old.

**A new Balsam—Shrubberies.**

THIS is a large, white, handsome species from the island of Ceylon, whence it was sent by Mr. Thwaites to our national garden at Kew, where it flowered last summer, after attaining the height of from two to three feet. The plant has been long known to science, from dried specimens sent home by Mrs. General Walker, who first named it in compliment to Sir W. J. Hooker. It has much of the character of the now common Himalaya Balsams, and comes near to *Impatiens candida*, but the spur is much longer than in that species. The nearest to it is *grandis*, a species not yet introduced, but known from Heyne's description of it in the ninth volume of the Madras Journal. It produces from four to six large white flowers in a head; the bottom or lower part is richly marked with purple veins; the spur is unusually long, and shaped like a huntsman's curved horn. Ceylon, and the whole Indian archipelago, together with the Indian continent, swarm with handsome species of these Balsams, wherever the circumstances favorable to their production are present, viz.: a moist climate and a moderate temperature. A dry, hot atmosphere is alike inimical to the whole race, in nature, or under cultivation. Hence, one species only is found in Madagascar, while, according to Dr. Wallich and Dr. Wight, the shady places on hill-tops enjoying a mean temperature of 70° during the Balsam season, abound with them all over India. Great numbers of them inhabit regions of a lower mean temperature during the seasons of their greatest perfection.

Balsams, though "common as household words," have been the subject of much dispute among botanists as to the real nature of the parts which compose the flower. Achille Richard in 1822, Decandolle in 1824, Kunth in 1827, Roper in 1830, Wight and Arnott in 1834, Wight (*Mad. Journal*, 1837,) Bernhardt in 1838, and Lindley, (*Bot. Reg.*) in 1840, with other men, able, but of less note, have offered very opposite views as to the nature of the floral parts in the flower of a Balsam, but Kunth and Lindley are now considered as having set the discussion on a proper basis, if not at rest. According to them, this flower, however irregular it may appear to the unlearned, is formed on

the usual plan of regular structure; five cells to the ovary or seed pod; and five stamens alternating with the cells. After these the flower is composed of two inner and two outer pieces, and each piece is composed of two lobes joined together by their edges; then, if each of the two innermost pieces were set free, they would fall into the places assigned to petals, or alternate with the stamens. The two outermost pieces, when set free, will fall into the places of four divisions of the calyx, and the spur forms the fifth division of the calyx, giving a regular flower on the quinary type, with the exception of the fifth petal, and that is supplied in some plants belonging to the order, *Hydrocera triflora* for instance, this completing the quinary, or five-part system—five cells for seeds, five stamens to fertilize them, five petals to house them, and five sepals to thatch the whole in one bud, or, as Linnæus put them, *Pentandria monogynia*.

At Kew, in the stove, this plant is between two and three feet high; leaves large, pointed egg-shaped, saw-toothed, smooth; leaf stalks varying from one to four inches long, with two oblong glands near the upper end; flower stalk usually longer than the leaves, and bearing an umbel of four or six flowers. It seems to be the *Impatiens biglandulosa* of Moon's Catalogue of Ceylon Plants, and is figured in the Botanical Magazine, t. 4704.

**Propagation and Cultivation.**—The *Salvias* now common in the borders, and even the *Chrysanthemum* itself, were once supposed to need the aid of the stove to bring them up to perfection. It is just the same with Indian Balsams like this. The first plant of this breed that I saw was one about a yard high, and nearly as much through, a little above the pot. It was in a late vinery, and about the end of July, and I shall never forget the shudder it gave me all over. The gardener was an old friend of mine, and the place one of the largest near London, and there were more red spiders on that Balsam than, I should think, were then in the whole county of Middlesex! Since then I have known the seeds of this very kind of Balsam to have been exposed to forty-seven degrees of frost; that is, five degrees below zero, without suffering in the least; but what is more curious, sow some of the seeds in two pots, and put one pot in a hotbed,

and the other pot in a bed of cabbages, and the latter will give you plants sooner than the other, nine times out of ten.

All the Indian Balsams, as they are called, that we know of in cultivation, are just as hardy as potatoes, if not more so; and this one from Ceylon looks as if it were in relationship with the Himalayan ones, and very probably, when we have enough of it from the experiment, it will grow out in the open air as well if not better than indoors. It is very likely that the herbage of this one will be killed by the first frost in the autumn, but then it is so easy to keep a few of them from cuttings in stove pots, and these few can be extended in the following spring, by cuttings, to any extent, as they root more freely than Fuchsias or Verbenas.

There is one use for which I want particularly to recommend this plant—first, as an experiment; and, secondly, if it proves to be what I anticipate, to be used in future along with candida, glanduligera, and all such, in filling up, for the first two or three seasons, the open spaces in newly made shrubbery. You never saw a new piece of ground planted with shrubs or ornamental trees that was not too thickly planted at once, or not half thick enough; and I never yet saw a shrubbery ten years old that was not ten times too thick, no matter how it was planted at first. The right way to plant shrubberies is to make choice, first of so many good kinds of evergreens, so many deciduous shrubs, and so many half-tall trees; to plant them all on one general plan—that is, in a regular mixture, or in groups, to allow them room enough for the first twelve or fifteen years' growth, without hurting one another, and then to fill in between them with a very common mixture of the cheapest things that one can buy in the nearest nursery, and to weed out these common things from time to time, as the specimen plants will grow on. Now, instead of buying so many of these common things for this purpose, it is ten times better to sow all over the ground plenty of seeds of Balsams, Double Poppies and Foxgloves, for the back parts; and Larkspurs, Silenes, Lupines and similar hardy plants in the front parts. It is true enough they may rob the soil to a certain degree, but then the closeness, and finished looks, the flowers, and the shade for the newly-planted things, are surely

worth a deal more than the robbing, which can be made good next winter, with a few barrow loads of dung.—*D. Beaton, in Cottage Gardener.*

### The Fuchsia.

THIS article is selected from Turner's Florist, and is written by Mr. G. SMITH, of Tooting Nursery, London. The article is illustrated by a colored engraving of three of the most superb Fuchsias we have yet seen, which are mentioned in the paragraph below.

This noble plant, adorning as it does like the castle and the cottage, is now rapidly advancing in all the leading points which constitute perfection, such as substance, contrast of color, etc. The following may be mentioned for example—first, a brilliant coral tube and sepals, with corolla of intense violet; secondly, a pure white tube and sepals, with corolla of deep violet; thirdly, a white tube and sepals, with bright scarlet or orange; also white tube and pink corolla; and fourthly, of self; in this class there are two or three noble varieties. It may be interesting to mention, that most splendid varieties have been raised of late greatly surpassing those dull, coarse kinds that were our best some few years back, crosses chiefly from Fulgens.

As regards cultivation, let a commencement be made with striking the plants for exhibition. September is decidedly the best for plants to be shown in June or July, and March for those in September. Select cuttings from the base of the stock plant, choosing those with triangular joints, and placing them in gentle heat, with a little shade. As soon as rooted, pot them in thumb-pots, in equal parts of rich fibry loam, peat, and decomposed manure, with silver-sand, and a little powdered charcoal over the crock for the first potting, and as you pot on into larger sizes, the charcoal may be used coarser; the peat and loam should be chopped fine, not sifted; this will be found a valuable compost through all the stages of their growth. In October the plants should be potted, and placed in any gentle heat, such as a frame in which cucumbers or melons have been grown. If this is not convenient a warm green-house will answer; if in the former, remove them into the latter by the middle of

November; let them be placed in the warmest part near the glass, and the plants will continue to grow fast until January, when they should be removed into sixty degrees of heat. Let them be shifted into three-inch pots; and where plants are required to be grown spherically, take care to encourage all branches, stopping them back to the second eye, by pinching them all around twice, leaving the leading shoot to grow unstopped until it may have attained a sufficient height. This will insure fine bushy plants. The form of the plant is, of course, a matter of taste. Most splendid specimens have been produced at Messrs. Frazier's, Lea Bridge Road; they were grown as standards, about five feet high, with their branches drooping nearly to the pot, and covered with bloom; these were quite equal if not superior to anything usually met with, both as to growth and beauty. Those who wish to possess themselves of plants of this description, will obtain them by removing the eyes on either side up to the last four joints from the top, and having now your plant grown to the required height, remove the leader, when the four joints that were left undisturbed will push freely. These should be stopped at the second joint, in order that the head may become sufficiently branched. Do not expect much the first year; the second, with good care, they ought to be satisfactory.

The Fuchsia must be placed out of doors for a month or two, especially those that have flowered early; this gives strength to the wood for the next year. Set them out in a shady situation as soon as their beauty is past, when they should be removed to a place of rest, anywhere, so that the frost and wet are kept from them. If you want them in June, let them be fresh potted; and if you require them in the same sized pot, rub a little of the old soil off, supplying the same with fresh. Like the Pelargonium, the Fuchsia always flowers best when the roots reach the side of the pot, so that with large plants the one-shift system should be practised; place them in the usual heat, give them the usual care, and when the plants come into bloom, supply them with manure-water twice a week; no liquid fertiliser is perhaps better for this plant than that made from sheep manure. Let the plants stand in pans during the blooming season; shade on all occa-

sions when the sun is bright, the light sorts especially; syringing frequently, fumigate, etc.

The following list comprises some of the best in each class, viz. Darks: Glory, a splendid variety, raised by Mr. Banks; tube and sepals bright scarlet; the latter broad and well re-flexed; corolla deep violet, bell-shaped; flowers large; plant of fine habit. "Dr. Lindley," also by the same celebrated Fuchsia raiser, is a noble variety; tube and sepals coral red; corolla dark violet-purple; flower large, and habit good. The foregoing are new. Nil Desperandum, (Smith) a fine dark, with red tube and sepals, and corolla of violet purple; of fine form and habit. Voltigeur, (Banks,) this is rather small, but amply makes up for this deficiency by its beautiful habit and abundance of bloom; color deep red, with violet purple corolla. Clapton Hero, (Batton,) tube and sepals waxy scarlet; the sepals are too small to make a first-rate show-flower, but the corolla is very large and fine purple, this, with a good habit and free blooming, makes it a very desirable flower. Don Giovanni, (Henderson,) crimson tube and sepals; corolla rosy purple, flower rather coarse, but of fine habit and a free bloomer.

Light varieties: Lady Franklin, (Smith) tube and sepals pure white, the latter very broad and well reflexed; corolla a purplish pink; of fine form and good habit, and a free bloomer; one that will be much sought after. England's Glory, (Harrison,) tube and sepals white, the latter expanded, but rather narrow and short; tube fine, corolla orange-scarlet; a free bloomer, and appears to be a good grower. "Mrs. Patterson," (Patterson,) tube and sepals white, the latter expand well, with corolla of violet purple; of fine habit and free in growth. This forms a new and distinct variety, being as large as Orion. Sidonia, (Smith,) tube and sepals blush, well reflexed; corolla violet purple; a free bloomer and good habit. Conspicua, (Banks) white tube and sepals; vermilion corolla, large and showy. Prince Arthur, (Nicholas) tube and sepals pure white; corolla scarlet, very large.

Selfs; Alpha, (Smith) red, with fine form, and sepals well reflexed. Orion, (Smith,) dark crimson; extra large and fine.

It must be borne in mind that the foregoing are all first-class varieties for exhibition,

but that there are many others which are very ornamental, of good habit, and well adapted for decorative and general purposes.

#### Hybridizing—Saving Seeds.

It is a well established fact that the seedling plant partakes mostly of the form and habit of the parent from which the seed was saved; on this consideration, it will be well to select the best formed flowers, and the most compact growing plants for this purpose, crossing them with those of other colors, which it is desirable to have of that form and habit. Light, or white, colored flowers have but little effect upon dark colored flowers; therefore, it is but little use to attempt to cross a dark flower with a white one. On the other hand a light or white flower, will readily take any color that is put on it, and thus, for the attainment of immediate results, select a light colored variety for the seed bearing parent, crossing it with a darker color; the progeny will partake of the habit and form of the parent producing the seed, with the color, or at least bordering upon the color of the male parent. In colors of about equal density, an intermediate color may be expected from the progeny, partaking equally of both parents.

We would just remark again, that in all cases, the most healthy and best shaped flowers should be selected for the purpose of seeding, with a view to improvement, as from such only, can desirable results be expected. We would also remark, that the hardiness of the seed bearing parent should not be overlooked, for by crossing many of our native plants with the tender exotic varieties, we might soon obtain hardy plants, with the splendid colors of the tender varieties. One more remark, it is necessary to keep in mind, that both parents must be of the same natural class of plants, for if this is overlooked and not strenuously adhered to, no success will attend the labors of the operator.—*American Gardeners' Chronicle*.

#### Weeds and Weeding.

THE remedies proposed for doing away with weeds, are only exceeded in number by the number of weeds themselves—but among the many methods some may be

adopted with propriety. Some weeds of the smaller kinds are destroyed by burning a slight coating of litter on the surface of the soil in early spring, and market gardeners so prepare soil for raising cabbage plants. Many kinds of the smaller weeds are destroyed by a coating of six bushels of common salt per acre after plowing, and a few days before planting. Some weeds, embracing quite a large class, may be done away with by two plowings at a few weeks apart, and when the field is intended for late crops, this may readily be done.

Where a neglected corner is so full of weeds that they can not be got rid of by ordinary means, then salt the soil so heavily as to destroy all growth, and by losing the use of it for one year, and adding lime with a full plowing, such salted soil will be found clear of weeds the following season and of improved fertility. The ultimate constituents of salt (*chlorine and soda*) are not unfriendly to vegetation, and they soon separate in the soil by chemical influence, and thus cease to be salt.

Root and ether hoed crops enable us to get rid of many weeds, when the crops receive proper attention—thus a carrot crop, if properly attended, will secure the removal of weeds. The use of properly constructed cultivators among root crops, if used sufficiently often, will save much labor in the removal of weeds, for they will turn out every weed between the rows, leaving those only in the rows to be removed by the hand or hand hoe. The use of the *push* or *scuffle* hoe in skillful hands, will do much to save the soil from weeds; if applied to a proper depth in a well disintegrated soil, it cuts off the weeds, and in the back action draws them above the surface, to decay without replanting the roots. Horse-shoes are also constructed so as to cut weeds deeply, and to leave the entire weed, root and all, on the surface to decay.

Never leave weeds a few days longer, because they are not going to seed. Large weeds seldom come forth with as much of their roots as smaller ones, and then their increased size robs other plants of their proper food; nor will their decay on the surface restore all they have robbed again to the soil, for a large portion of the nitrogenous portion of their constituents will be lost in the atmosphere. Salt and lime mix-

ture, used in composts, destroys the accidental weed seed from the stable, by assisting in their more perfect decomposition. Hog-pen manure will decompose with such

violence as to destroy many, and when the divisor used is decomposed muck or charcoal braze, the ammonia is not lost even by so violent a decomposition.—*Prairie Farmer*.

## Homology.

### PEACHES AT THE SOUTH.

THE peach is a favorite, and in many instances almost the only fruit tree cultivated by our planters. Requiring a soil of but moderate fertility, its culture is so easy, its enemies and diseases are so few, and the return so speedy, that there is no excuse for being without good peaches.

We escape the yellows and the curl entirely, except in our northern importations, and even these generally recover, though checked for a season. We have the borer, but not abundantly, though he is on the increase. The worm in the fruit itself, is also very troublesome here, being much more common than at the north. This insect seems to have a preference for certain white fleshed varieties, and the two kinds most to his taste, appear to be the White Blossomed Incomparable, and Morris White. Of these two varieties, you will hardly find a fruit without from one to three or four of these insects about the stone.

There is also a species of borer—a white grub, about an inch long, that eats directly under the bark, completely through the sap-wood, entirely around the limb or trunk, generally taking those not over an inch in diameter. Concealed by the bark, he eats quietly through the new wood, and very likely the first intimation you may have of his presence, is that your young peach, cherry, plum, or perhaps elm trees, (for he is a general feeder,) are broken square off by the wind or their own weight. Happily, this insect is not very abundant.

Of the above enemies to peach culture, the borer and the worm in the fruit are the most serious, but fortunately they are easily managed. If the ground about the tree be kept clean and free from weeds, the borer will not usually attack it, still less if the stem be protected by a few quarts of lime

or leached ashes, placed around the collar of the tree in the spring.

If a lodgment be already affected, the worm can either be cut out, as he lies near the surface, or hot water can at this season of the year (October) be poured about, and into his haunts, which will destroy the grub without any injury to the tree. The worm in the fruit is much less frequent in orchards where the pigs are permitted to consume the fallen fruit.

Another somewhat serious difficulty in peach culture, is a result of bad pruning. It is the tendency to overbear and break down, from the excess of the crop. More peach trees in this vicinity are destroyed or seriously injured from this cause, than any other.

If the tree be properly shortened in, it will not overbear, and if the branches are not allowed to divide in forks, the tendency to break and split off in case of a full crop is prevented.

But in seasons like the present, (1852) the loss of peaches by decay while approaching maturity, is more annoying than anything else in peach culture. When the season is warm and wet, very few kinds of peaches will ripen well, especially on moist or very rich soils.

Indeed, the most suitable soil for the peach, is quite the reverse of that which is best adapted to the apple or quince. These delight in low rich valleys or bottoms, and in such soils, the tree and fruit will continue growing vigorously until late in the season, and apples from such locations may be kept well in the winter. But the peach, to ripen sound and high flavored, requires a dry and but moderately fertile soil; a hill-side being as good a situation as any, and it is all the better if it faces the north.

When the trees are planted, the holes may be made large and enriched, to give a good growth of wood, but afterward applications of lime, ashes or leaf muld are much better than those which excite rank growth, as they do not impair the flavor of the fruit, or cause it to decay.

It is the general belief here, that this fruit can be propagated from seed, with considerable certainty of procuring good peaches. Not that by planting a peach stone, you will invariably get a peach precisely like the one from which it sprung, but the chances are in favor of such a result, while it is still more probable that the variation of the seedling, if any, will be merely in size or time of ripening. But in very many cases, the seedling is precisely the same as its parent. For example, there is a peach known here as the White English, a cling of good quality, described hereafter. It reproduces itself from the seed with remarkable uniformity. Dr. Camak has pointed out to me three trees, all seedlings of this variety, and the stones from three different sources, all remarkably uniform in size, shape and quality, and identical with each other and with the fruit from which they originated.

There is also the Blouton cling, described below, that is propagated from the seed with the same certainty. Other instances might be mentioned. From the facts that have come to my knowledge, I am inclined to believe that the stone of a cling is more likely to produce a tree identical with its parent, than one from the free-stone varieties. It is also the general opinion, that a stone from a seedling is more likely to reproduce its kind, than if taken from the fruit of a grafted or budded tree. Still free-stone peaches will often reproduce their kind from seed. I have a small free-stone peach, of about second quality, a fine bearer, and one of the earliest, which is very common about here, and invariably raised from the stone. It is much harder than the first rate-budded peaches generally, of the same season, bearing a fine crop the present year, when most of the imported varieties were cut off by frost—a quality which renders this peach desirable.

At the north, I believe, the free-stone peaches are universally preferred, and the trees are mostly propagated by budding.

Here, most tastes decidedly prefer cling-stone peaches, and the great majority of trees are seedlings. There, I suppose, one would be laughed at who should resort to seedlings, with the hope of getting from them a supply of first-rate peaches. Here, until very recently, it was the common, and in truth a tolerably successful practice. It is owing to the different class of peaches cultivated in each section, that this diversity of belief and practice exists.

Here, the peach does best budded or grafted on its own roots. Plum stocks they would soon overgrow and break off, while probably they would be no more safe from the borer. We can begin our budding in June, on seedlings planted the previous fall, and as soon as the bud starts, the top being headed down, if on good healthy stocks, they are frequently quite large enough to transplant the ensuing winter, or in a twelve-month from the time the seed was planted. Budding may be continued through the season, until about the middle of October, but early budding is most practiced.

We find it better in budding to leave attached to the bud not only the leaf stalk, but a small portion, say about half an inch, of the lower part of the leaf itself, as it is found that this attracts the sap, and the budding is more likely to be successful. But if we wish to keep the cion a day or two before use, we remove all but the foot stalk. Peaches are not often grafted with you. Here fine trees are raised by cleft grafting in the root, during the winter. They may be planted out where they are to stand, and if well cultivated will make a fine growth the ensuing summer.

Communications appeared some time since in the Horticulturist, from Mr. Whitfield and Mr. Harwell, the tendency of which was to create doubt whether the peach tree from the north is not, from the period of blooming, unsuited to a southern climate. In fact there exists here a prejudice against all imported fruit trees, arising from the general want of success with the northern winter apples, which, if it was confined to the latter, it would not be worth while to combat, as a large amount of money has been expended upon them with no other benefit to the country than to establish the fact of their general want of adaptation to this climate. But to tell us that the pear or



peach from the same source is unsuited to this section, is sheer nonsense; for trees planted here in 1836, and almost every season since, are living witnesses that it is not true.

Since Mr. Harwell's communication was published, two blossoming seasons have passed. There seems to be here a slight but observable difference between the native and foreign varieties, still the latest blooming native peaches continue in flower until the earliest imported ones come into blossom. But upon the whole, the native varieties are about a week earlier than the others, in blossoming. [This fact is also observed in seedling trees here in the North.] The first peach blossoms that appear are usually natives in their first season of flowering, which are generally in full bloom before full grown trees in the same aspect show a single opened blossom. Probably these young trees, not throwing their roots so deeply into the earth, the soil about them becomes sufficiently warm to quicken circulation and bring on inflorescence, when full aged trees which throw their roots more deeply in the underlying soil, still cold, are not so easily affected by atmospheric temperature. Or perhaps the constitution of the young tree may be more susceptible to excitement from the spring warmth.

In ordinary seasons here, this difference in the time of blossoming between native and foreign varieties is not of much practical importance. Both were cut off in 1849 by the same frost, unless where protected by buildings adjacent or some accident of site or exposure. But it might happen if both were equally hardy, that the later period of flowering would give us a crop of the northern peaches, when the others being more fully in blossom were cut off. But practically this is of very little consequence, as both blossom early enough to produce a good crop, except in case of frost, when, as a general rule, we find the high flavored budded peaches, whether native or not, are more tender and easily affected than our common seedlings. The latter were almost the only ones hardy enough to withstand uninjured the frost of last spring.

In endeavoring to establish the opinion that the South must look to her native fruits to fill her peach orchards, would it not be well to limit the boundaries where this be-

comes a necessity to those sections of country lying upon the gulf of Mexico and its tributaries. It is from that quarter chiefly that we hear of the ill-adaptation of northern peaches. Here no such difficulty is experienced, and it would be folly to give up George IV, Early York, etc., to fall back upon the hog peaches, or even the best natives we could get, until a list equal to those rejected could be obtained. It is true that there are some few peaches, native here, nearly or quite equal to the best imported. But the peaches required to make a collection equal to that offered by almost any nurseryman, are scattered from Virginia to Texas, and when gathered at great expense, it is doubtful whether they would be found hardier or better in any respect than those we have. One of our earliest peaches is a native. The best that ripen with us after the middle of September, are natives, and are just merely good peaches, but our *best* varieties ripen in June, July, and August, and are generally imported varieties. About twenty-five varieties will give an abundant succession from the 20th of June until the first of November, and the whole collection, freight and all, (except budding five or six natives) will hardly cost five dollars. Now, to gather a collection as valuable, how much money would be required, how much travel in the peach season, how many trees would have to be planted, budded, fruited and thrown away as worthless?

Who would reject the Grosse Mignonne from his list, because it did not happen to originate here. A native of France, it is in England the best peach grown, and here the only peach approaching it in flavor is George IV, a northern variety.

Our remarks upon the peach will be concluded by a few notes upon the varieties cultivated here, in regard to quality, time of ripening, and productiveness. The times of ripening of the peaches described below, are for 1850 and 1851, as the crop the past season was greatly injured by frost. They are described in the order of ripening.

1. Columbus June.—Brought here from Columbus, Georgia, and said to be a native of the state. Leaves with uniform glands. Flowers small. Fruit medium size to large; flattened or slightly hollowed at the apex. Suture shallow. Skin pale yellowish white, with a rich red cheek toward the sun. Flesh

slightly red at the stone, melting, juicy, sweet, and high flavored. A good bearer and an excellent peach for its season, in every respect. Ripens 20th of June. Indispensable.

2. Early York.—We have a peach from the north, without the name, which I think is this variety. An excellent peach, very juicy, and in every respect worthy of cultivation. June 20th.

3. Walter's Early.—Bears an abundant crop of melting and delicious fruit, which ripens about the 1st of July. Not so easily injured by frost as many others. Succeeds as far south as Mobile. Likes a sandy soil.

4. Red Rarieripe.—Ripens about the same time. Bears well, and is a great favorite here. Fruit melting and high flavored.

5. Strawberry.—Generally ripens about the 1st of July, and if allowed to overbear is of but ordinary quality. This year a few escaped the frost, and ripened some six days earlier than usual and were very delicious; if well thinned, always so.

6. Royal George.—This peach is not inclined to overbear, but ripens a moderate crop of delicious peaches about the 4th of July.

7. Coolidge's Favorite.—The peach received here under this name bears finely, and ripens about the 5th of July, but is too acid and poor to cultivate. We may not have the true variety.

8. Early Admirable.—Ripens about the 5th of July. Productive, large, and good. It will stand a frost, without much injury, that will cut off Grosse Mignonne entirely. Bore a good crop this season. One of the best.

9. Early Newington Free.—Another hardy, excellent variety, bearing a fair crop the present season in spite of the frost. One of the most desirable peaches grown. Ripe July 5th.

10. Gross Mignonne. This is, perhaps, the best free-stone peach cultivated. Fruit large, beautiful, and delicious, excellent in every respect. Ripens July 8th. If it has a rival, it is,

11. George IV.—Which ripens a day or two later, and is in general equally esteemed with the foregoing for beauty and excellence.

12. Malta.—Ripe the 10th of July. Large, juicy and good.

13. Morris' Red Rarieripe.—Ripe about the middle of July. Productive, melting and excellent.

14. White Blossomed Incomparable.—Ripe the 15th or 20th of July. Nearly always wormy, and not worth cultivating. Of only second-rate quality.

15. Crawford's Early.—One of the best cultivated, always large and fair, and pretty hardy. Ripe middle of July. Fruit often nine inches in circumference.

16. Bellegarde.—This peach came here as the Red Magdalen. It is hardy and productive. Will stand frost better than most of the good varieties. The fruit is melting and delicious. One of the best. Ripe about the 20th of July.

17. Noblesse.—Ripens about the 20th of July, and very excellent. Well worth cultivating, even in small collections.

18. Belle de Beaucaire.—Received by Mr. Camak from Mr. Prince. Leaves with globose glands. Flowers small. Fruit very large, (about the size of Crawford's Early) roundish, with protruding point at top. Suture very shallow, but distinctly marked from apex to stem. Skin light yellowish green, with cheek slightly reddened. Flesh greenish yellow, and light red at the stone; a little coarse, but delicious; full of a very rich, slightly acidulated juice. Tree thrifty, bears regularly and sufficiently abundant. Skin slips readily from the flesh without the use of a knife. Ripe last of July. One of the best.

19. Late Red Rarieripe.—Ripens last of July. Productive and good.

20. Royal Kensington.—Ripens the first of August. Somewhat resembles Grosse Mignonne, but drier, and not so good.

21. Late Admirable.—Ripens the first of August. One of the very best late peaches. Lasts till the middle of August. Still not equal to Gross Mignonne.

22. Morris White.—Ripens early in August. This peach is very apt to be wormy. I have never seen it first-rate, always acid and somewhat astringent.

23. Crawford's Late.—A magnificent peach, large and productive. Ripens early in August. One of the very best. Indispensable.

24. Ispahan.—Received under this name, but is not the Ispahan of the books, but seems to resemble very much the Red Cheek

Melocoton, and is perhaps identical. Generally a large and rather fine variety. Ripens about the 10th of August.

25. President.—One of the indispensable varieties. Ripe about middle of August.

26. Green Catherine.—A large and productive peach, but inferior to the foregoing, and apt to be wormy. Ripe August 15th.

27. Newington Cling.—Ripe about the 10th of August. One of the best of clings. Rich and juicy.

28. Pace, or Tinley.—Ripe middle of August. Fruit large to very large in size, oval, pointed at apex. Skin of dull, dark, purplish red, covered with a thick, dull, gray down. Flesh dark red, marbled with orange, moderately juicy; rich, not too acid for most tastes. Productive, and very hardy. Resists frost better than most peaches. Skin peels off readily when fully ripe. Loses flavor if over ripe. Externally, the color is something like Blood Cling. A free-stone and a great favorite in most parts of the state, but not first-rate. Reproduces itself from the stone.

29. Red Cheek Melocoton.—Ripe middle of August. A beautiful and productive peach, of fine quality, but not the best. Merits cultivation for its hardiness. Ripens much earlier some years than the time above specified.

30. Lemon Cling.—In this climate delicious; one of the best of the clings. Ripe 10th of August.

31. Yellow Blanton Cling.—Ripe 20th of August. Leaves large, with globose glands. Tree thrifty and healthy. Fruit large, and in general shaped like the Lemon Cling, with the same projecting swollen point. Skin rich orange, with a slightly red cheek. Flesh orange yellow, firm, but full of a delicious vinous juice. Originated here. Later and of better quality than Lemon Cling. To my taste the best of the clings. Reproduces itself from the seed.

32. Pavie de Pomponne.—A magnificent looking peach, but the flesh is too coarse to be a favorite.

33. Blood Cling.—Ripe the 20th of August, but unfit for eating. When very ripe it is barely tolerable. Don't know any reason why it should be cultivated.

34. Tippecanoe Cling.—Ripens the latter part of August, and is large, juicy and fine. One of the best.

35. White English Cling.—Leaves with globose glands. Fruit very large, and oval. Suture slight, with a swollen point at top. Skin clear, creamy white, with sometimes a slight hue of red on the sunny side. Flesh delicate white, free from red at the stone, to which it firmly adheres; very rich, juicy and high flavored. As it is entirely free from color, it is the very best for preserving, or for brandy peaches. Has no tendency to be wormy, as most white peaches have. Ripe early in September. Grows true from the stone. Very valuable for its lateness and excellence. Widely known here. Brought originally from Virginia.

36. Bough.—This is the next named peach of first quality that ripens after the White English. A native of this state. Leaves with globose glands. Fruit medium size, roundish, terminated with a small point. Suture obscure. Skin pale yellow, almost white, with a slight blush toward the sun. Flesh yellowish white, melting and juicy, with a sweet, pleasant flavor. By far the best fruit of its season. Indispensable. Free-stone. Ripe 1st of October.

We have three peaches, of pretty good quality, without names, two of which were received from Mr. Prince, by Mr. Camak, with the statement that they were too late to be valuable in that climate, and the other obtained by Mr. Camak, from an old field in this state, all of which are really valuable, as they ripen between the 15th of September and 15th of October. We have also a cling of very good quality in warm seasons, that ripens the 1st of November, making it possible to extend our peach seasons from the 20th of June till about the middle of November, in favorable years.

#### *Best Ten Varieties.*

On the above peaches, the best ten for a succession, in this climate, are Columbus June, Walter's Early, Grosse Mignonne, Crawford's Early, Belle de Beaucaire, Crawford's Late, Newington Cling, Yellow Blanton Cling, White English and Bough. Add to these Early York, Early Admirable, George IV, Bellegarde, Late Admirable, Late Led Rareripe, President, Lemon Cling, Tippecanoe, November Cling, and the unnamed varieties above for October, and the collection is quite as large as desirable.—

WILLIAM N. WHITE,

—*Horticulturist.*

*Athens, Ga.*

**An Interim Report to the Pennsylvania Horticultural Society.**

THE Fruit Committee respectfully present the following ad interim report ;

Since the stated meeting of the society in March, the following fruits have been submitted to the examination of the committee :

From Dr. J. MARSHALL PAUL, of Belvidere, N. J.—Specimens of six varieties of apples :

1. Name not known—large ; roundish oblate ; red in stripes ; of "good" quality.

2. Of medium size ; roundish, inclining to conical ; red in stripes on a yellow ground ; flavor not particularly fine.

3. A New Jersey Seedling—small oblong, angular ; red on an orange-yellow ground ; pleasant flavor ; "good" quality.

4. Of medium size ; roundish oblong ; mottled and striped with red on a greenish yellow ground ; has some resemblance to Herefordshire Pearmain, though inferior to it in flavor.

5. Priestly—of fine size, but partially decayed.

6. Beautiful specimens of the Monmouth Pippin—a native of Monmouth county, New Jersey. Although one of our best winter apples, it is not described in Downing's Fruit and Fruit Trees of America, nor in Thomas' Fruit Culturist. A concise commendatory notice of it, however, is contained in Kenrick's New American Orchardist, and in Barry's Fruit Garden. As it does not appear to be extensively cultivated or generally known, although its productiveness, size, and quality render it worthy of a place in every collection, we give the following description : Size rather large ; roundish, inclining to conical ; greenish yellow, with numerous russet dots, sometimes a few crimson spots, and uniformly a red cheek ; stem of medium length, rather slender ; cavity deep, open, slightly russeted ; calyx large ; basin deep, sometimes plaited ; seed light grayish brown, rather large ; flesh yellowish white, fine texture ; flavor very pleasant ; quality *very good*, if not "*best*."

From H. R. NOLL, of Lewisburg, Union county, Pa.—Specimens of two varieties of apples :

1. The Adams, a Pennsylvania seedling which originated with James Adams, of White Deer township, Union county, and noticed under the name of Noll's No. 1, in

the ad interim report for November last. Large ; roundish oblate ; faintly mottled and striped with red on a greenish yellow ground ; stem half an inch long and one-ninth to one-sixth of an inch thick ; cavity broad, acute ; calyx rather large, segments closed ; basin wide, moderately deep, plaited ; flesh greenish white, of fine texture, rather juicy ; flavor pleasant ; quality "*very good*." The specimens examined on the 11th of November were only regarded as "*good*," being somewhat dry and mealy.

2. The Major, a native of Pennsylvania. This apple originated with Major Samuel McMahan, of Chillisquague, Northumberland county. Size large ; roundish ; red, sometimes blended with yellow on the shaded side ; stem variable in length, of medium thickness ; cavity rather wide, moderately deep ; basin uneven, shallow ; flesh yellowish, crisp ; flavor pleasant, agreeably saccharine, and resembles, in some measure, that of the Carthouse, to which, however, it is superior ; quality "*very good*."

FROM CHARLES KESSLER, of Reading.—Specimens of five varieties of apples :

1. The Heper, a seedling from the garden of Mr. Heper, of Reading. Size under medium ; oblate, inclining to conical ; handsome, waxy yellow ; stem rather long and slender ; cavity wide, deep, acuminate, and considerably russeted ; basin contracted, moderately deep, irregular, furrowed ; flesh rather dry, but of pleasant flavor ; quality "*good*."

2. The Zieber, a seedling from the premises of Mr. Samuel Zieber, of Reading. Size below medium ; roundish ; waxy yellow, with a striped red cheek, and a cicatrix on one side, extending from the base half way to the calyx ; stem broken off ; cavity slightly russeted, moderately deep and very narrow, with a small protuberance projecting into it ; calyx small ; basin narrow, rather deep ; flesh somewhat dry, but pleasantly flavored ; quality "*good*."

3. The Neversink, a seedling found last autumn, growing among the brush on the side of the Neversink mountain, in Berks county, Pennsylvania. Though not five feet high when discovered, its branches contained two bushels of apples of most attractive appearance. Fruit large ; roundish ; exterior of an exceedingly beautiful waxy orange yellow color, with a few russet dots, and a del-

coarsely striped and richly mottled carmine cheek; stem very short and rather stout; cavity narrow, acuminate, shallow; calyx large; basin deep, rather wide furrowed; seed grayish yellow, acute-ovate; flesh yellowish, somewhat tough, owing probably to the fruit being much shriveled; flavor approaching that of the pine-apple; quality "very good."

4. The Marks, a seedling apple from the premises of Mr. Marks, of Berks county, Pennsylvania. Size medium; roundish, tapering slightly to the crown, and somewhat angular; yellowish white, with a few russet dots, and nearly covered with a faint orange blush; stem half an inch long, a twelfth of an inch thick; cavity narrow, deep, acuminate; calyx small, closed; basin narrow, rather deep, slightly russeted; seed yellowish grey; flesh whitish, tender, fine texture; flavor delicately perfumed; quality "very good" if not "best."

5. The Pfeiffer, a seedling of Spring township, Berks county, Pennsylvania. Size below medium; roundish; sparsely streaked with red on a yellowish green ground on the shaded parts, the streaks being more numerous, and on a fawn colored ground, on the side exposed to the sun; stem broken off in all the specimens, slender, inserted in a narrow, superficial cavity; calyx rather large; basin wide, moderately deep, plaited; specimens evidently unripe. The Pfeiffer is represented as being a very late keeping variety,—the period of maturity extending to July.

From DAVID MILLER, Jr., of Carlisle.—The York Imperial, or Johnson's Fine Winter. This apple is believed to be a native of York county, Pennsylvania. Size rather below medium; truncated-oval, angular; the unexposed side is mottled and striped, so as to present a grayish red aspect on a greenish yellow ground, and on the sunny side the color is a dull crimson; stem short and moderately stout; cavity wide, and rather deep; calyx small, closed, and set in a deep, wide, plaited basin; flesh greenish-white, tender, crisp, juicy; flavor pleasant and agreeably saccharine; quality at least "good," to many tastes "very good."

From P. R. FREAS, of Germantown.—The Jenkins, a native apple of Montgomery county, Pennsylvania, which originated with John M. Jenkins, of Hatfield township, near Mont-

gomery Square. Fruit small; roundish-ovate; red, interspersed with numerous large white dots, on a yellowish ground; stem more than half an inch long, slender; cavity deep, rather wide, sometimes russeted; calyx closed; basin deep, open, furrowed; core above medium; seed grayish brown, acute-ovate; flesh white, tender, fine texture, juicy; flavor agreeably saccharine, exceedingly pleasant and aromatic; quality "very good," if not "best." The Jenkins is one of those delicious little apples peculiarly fitted for the table at evening entertainments. And, in conjunction with the evening party, will probably supplant the Pomme d'Api on those festive occasions.

PHILADELPHIA, April 19, 1853.

On May 17th, the Fruit Committee submitted an ad interim report, from which it appears that the Pfeiffer apple, noticed and described in the report for April, but not then sufficiently mature for testing, has since been examined and is regarded as of "good" quality.

The Freeze and Thaw apple, from Mr. JOHN GORGAS, of Delaware—Grown on the farm of his father, in Roxbury township, Philadelphia county, Pennsylvania. Size medium; conical; profusely striped and mottled with bright red on a yellow ground, with a number of light dots, and frequently one or more white splashes near the base; stem three-fourths of an inch long, slender, inserted in a wide, deep, acuminate cavity, partially russeted; calyx small, closed, set in a moderately wide, superficial, wrinkled basin; flesh of fine texture, but deficient in flavor, and on that account can scarcely be considered of "good" quality, if the specimens were cut at the proper time. Mr. Gorgas informs us that it may be left on the tree till it repeatedly freezes and thaws, without sustaining injury; hence the name.

A red apple, from CHAS. KESSLER, Esq., of Reading.—Below medium size, which originated on the premises of Mr. Hains, of Pricetown, Berks county, Pennsylvania. Form roundish oblate; skin thin, striped and marbled with bright red, and marked with numerous whitish dots near the crown; stem long, rather slender, inserted in an open, deep cavity; calyx large, set in a wide, rather deep, slightly plaited basin; the bright red stripes remain imprinted on the fruit after

the delicate skin has been removed ; the coloring matter penetrating and partially staining the otherwise whitish flesh, which is exceedingly tender and of fine texture ; flavor agreeable ; quality "*very good*."

The Speckled Oley, from CHARLES KESLER, Esq., of Reading—From Oley township, Berks county, Pennsylvania. This apple is said to be beautiful when in perfection, and usually one-third larger than the specimens sent to us. Size two and a half inches by two and five-eighths ; roundish ; striped and mottled with red on a greenish yellow ground, and thickly covered with large white dots, most of which contain a russet speck in the center ; stem three-eighths of an inch long, by one-tenth thick, inserted in a very narrow, acute cavity, sometimes russeted ; calyx small, set in a shallow, furrowed basin ; seed long and of a light yellowish brown color ; flesh rather dry and mealy, but with a pleasant flavor ; being over-ripe, an accurate judgment could not be formed of its quality.

A large greenish-yellow apple, from the same, with a faint brown cheek ; roundish, inclining to conical, and somewhat angular ; stem short, rather stout, and fleshy at its junction with the branch ; cavity acute, narrow, russeted in rays ; calyx small ; basin moderately deep, not wide, furrowed ; flesh tender, juicy ; as the specimens were over-ripe, the quality could not be accurately ascertained.

Newtown Pippin, from the same ; from Berks county ; large ; roundish oblong ; greenish yellow, with faint broad stripes of red on the side exposed to the sun. Not true to name, and not equal in quality to the genuine Newtown Pippin.

From Mr. SLINGLUFF.—Beautiful specimens of pears, from a tree purchased for the Catillac, but which proves to be Uvedale's St. Germain. The latter is distinguished from the former in being pyriform, while the Catillac is broadly turbinate. Both are valuable only for culinary purposes, and one of them (Uvedale's St. Germain) is familiar to us under the name of pound-pear.

Pears labelled St. Germain, from JONATHAN C. BALDWIN, of Downingtown, which we regard as not true to name. They were not in good condition when received, and we were consequently unable to test their quality. Mr. Baldwin, however, who is a dis-

tinguished promologist, has expressed so favorable an opinion of the variety, that we have drawn up the following description of it from the specimens he sent us : large ; obovate pyriform ; greenish yellow, with a brownish red cheek ; stem an inch long by one-sixth thick, inserted without depression ; calyx set in a deep, narrow, sometimes wide basin ; seed very large ; flesh yellowish white, juicy ; specimens not in a condition for us to determine the flavor and quality.

The Boas-apple, from Dr. BRETOLET, of Oley township, Berks county, Pennsylvania, which was introduced into Oley about fifty years ago, by the Rev. Mr. Boas, of Reading, from Exeter township, where it is known as the Kelter : Medium size ; roundish oblate ; deep crimson in stripes of different hues, with one or more whitish yellow blotches near the base, sometimes only faintly striped with red on a greenish yellow ground ; stem very short and thick, inserted in a moderately deep, not very wide cavity ; calyx set in a plaited basin variable in size and form, sometimes superficial and wide, sometimes rather deep and narrow ; core small ; seed very small, plump, acuminate, grayish brown ; flesh yellowish white, crisp ; flavor pleasant ; quality "*very good*." Said to be a long keeper.

#### Nomenclature.

DR. WARDER :—In looking over the April number of the Western Horticultural Review, I find on pages 311 and 312 a description of the "Western Spy" apple. I was a little surprised, that while horticulturists and horticultural societies all over the country are trying to reduce synonyms of fruits and names to some system adapted to the wants of our wide spread country, that so important and useful a journal as the Western Horticultural Review should be the channel through which a knowledge of dissimilar fruits with similar names is disseminated.

It is a very common thing for nurserymen in receiving orders for trees, to find wanted, say five Spitzenbergs, five Swaar, five Newtown Pippins, five Russets, etc., etc. ; and

it is no easy matter to tell whether the Esopus, Newtown, Flushing, White, or some other Spitzenberg is wanted; and so with the rest of the families of fruits. Upon such a system may not the next generation be as much in the dark in regard to the "Spys," as is the present with the Pippins or Jenetings?

But there is still another difficulty along the upper Mississippi: We receive a great many apples from southern Illinois, Missouri, and southern Iowa, and among them are a large number sold for "Jenetings." Anything that resembles it in size, shape or color, and some that do neither, are sold as the true Jeneting; and if such are the fruits, what are the trees?

I see also among the chairmen of the State Fruit Committees the name of James Grant, of Iowa. Judge J. Grant, of Iowa, is a resident of Davenport, not Burlington. I make this statement for the benefit of those wishing to address him on that subject.

I am much pleased with the Review; and believe it to be just what the West needs, and will ere long appreciate.

Very truly, etc., H. S. FINLEY.

SCOTT NURSERY, DAVENPORT, IOWA, April 23, 1853.

REMARKS.—The above communication is inserted to afford an opportunity of agreeing with the writer as to the difficulty of which he complains, and also to apologize for the use of the title "Western Spy." In recording notices of fruits we are obliged to take the names as we find them; but this is no reason why Mr. Finley, myself, or any other gentleman may not exercise his talent in the invention of a more correct nomenclature, should such a thing be demonstrated to be practicable and desirable. For myself, I can see no objection, but on the contrary great practical convenience in classifying under some general family title, such varieties of fruits as are clearly related; thus we have the Rareripes and Melacotons among

the peaches, which, though they possess varying qualities, are all so much alike as to be easily recognized as congeners. With the apples, on the contrary, it is unfortunately not the case: especially with the Spitzenberg, and some other families, nor can I say it is the same with the Spys. A favorite name will be ridden as a hobby.

With regard to the other difficulty, we need not only intelligence on the part of nurserymen and dealers, but honesty likewise, and a continual watchfulness and effort to overcome the "confusion of tongues" which ignorance and knavery are constantly tending to produce among us. Such things, unfortunately, are not confined to the upper Mississippi; there are even men who claim to be nurserymen of good standing who have not hesitated to furnish trees with names as ordered when they did not possess the varieties required. Let us hope that the intelligent committee from Iowa, with James Grant at its head, will present the nurserymen of Iowa before the American Pomological Society in a light that will be creditable to them, and show the world that they, at least, desire to occupy an honorable position among their fellows.

#### The Everlasting Curculio.

THE reader will exclaim in response, "Monsieur Tonson come again!" Yes, come again, and we fear will repeatedly continue to come for our annoyance until we acquire more thorough practical knowledge of his habits. Many communications from friends near and far are received, and queries, both oral and written, are made as to the best method of effecting its extermination. Great discouragement prevails in some regions in planting the plum at all, notwithstanding the recommendations of consociate hog-pens and chicken-yards. Horticultural societies have offered liberal premiums, and in the southern periodicals it is proposed to

raise a purse of \$100,000 as a premium to an entomologist "who would thoroughly investigate the history of this dreaded little enemy, and give to the world a simple, cheap, and efficient antidote against its ravages." One of the best articles on the subject is from the pen of L. B. Mercer, of Palmyra, Georgia, and appeared in the *Southern Cultivator* for May. He modestly claims to be a novice in horticultural affairs, but shows himself familiar with the subject of entomology.

I have before me an amusing letter from one who styles himself a western wood-chopper. The author complains that he has sought for all the suggestions of various writers, many of whom assume to be very positive as to the efficacy of their proposed remedies; among them he finds contradictory statements, some of which do not correspond with his own observations. In the midst of this confusion and uncertainty he appeals to the Editor for definite information. Alas! what can be done but acknowledge one's ignorance, and recommend a perseverance in the farring or shaking process, by which means all those which are secured may at least be disposed of.

#### Pruning and Root Pruning of Apple Trees.

Mr. Editor:—In plowing my trees I generally throw the earth toward them, so as to leave a ridge with the tree, and should the plow strike a root allow it to cut through if the team can pull it. My trees are thrifty, but whether any more or less so in consequence of cutting the roots, is a question that I should be glad to have answered by any of your correspondents who have had experience in the matter.

Since pruning the branches of an apple tree is known to be an essential operation in its culture, it does not follow that a random process of a similar character upon the roots must prove beneficial. Facts only can determine this point, and I have met with none whatever upon the subject. Have you?

The old Yankee time of pruning branches

was in February or early in March. The Genesee Farmer led off in recommending May or June as the best season for pruning apple trees. Is it a well established fact that June is a better month than January for pruning apple trees? In this part of the State, where some of the orchards are large, and work during the growing months always crowding, it would be quite convenient if we could be allowed to perform this work in January and February. Indeed some of us take that liberty now.

If any well ascertained facts are to be known relative to the best season for pruning, a large number of your readers would be gratified if permitted to understand them. So far as it relates to apple trees not exceeding four or five years old, many hundreds of which I have planted and raised to full maturity, I have been in the habit of pruning them at any time throughout the whole year, as my taste or caprice dictated. Nor have I discovered from the effect upon the growth or the health of the tree that any one season deserved preference over any other.

Had I a favorite theory on the subject to establish, or had I listened to the ingenious exposition of some man of acknowledged science who had adopted one, there is reason however to suppose that my preception of facts in the case might have been more definite and satisfactory.

Are there existing and recorded facts, (not arguments nor guesses, nor reasonings from analogy,) to show that one month has a decided preference over another, during the range of January, February, March, April, May and June, especially for pruning apple trees? And if so, what months have it?

Are there well ascertained facts to show that midsummer or fall pruning is deleterious, or of little use? Respectfully, your friend,

WILLIAM S. WAIT.

GREENVILLE, Illinois, February 5, 1853.

—*Prairie Farmer*.

#### Cultivation of Orchards.

A RECENT number of the Farmer contains a report of a discussion on the subject of the cultivation of orchards, in which all the speakers agreed in opposition to the doctrine generally taught. In that discussion, two very distinct and different things—usually associated it is true, nevertheless not identical—



seemed to me to be confounded, namely: the mere tillage of the soil of an orchard, which is one thing, and the growing and removing from it of exhausting crops, which is quite another. With a due reference to this distinction probably the discrepant observations and opinions might be brought to harmonize.

Surely no reflecting man, at least no one acquainted with the first principles of agricultural science, will maintain that the bearing off in annual succession full crops of corn or potatoes, with no corresponding return to the soil, has the effect to increase the quantity, or to improve the quality of the produce of the trees. No soil can long bear double cropping. The effect of cropping an orchard with grain must sooner or later prove detrimental to the trees and the fruit. The effect is essentially the same if the crop harvested be grass from the sward. Whatever is gained in the hay is so much lost in the fruit. In fields devoted to grazing the same injury does not accrue, for the obvious reason that a constant return is made to the soil, fully equivalent to the produce consumed (?) Orchards in meadows and cultivated fields would enjoy the same impunity were care taken to supply them with sufficient and suitable fertilizing materials.

As to the question whether orchards should be ploughed or not, without reference to the production of any other than their own legitimate crop, there certainly can be no one rule to fit all orchards, any more than there can be only one system or routine of cultivation and management for all soils. It becomes an individual question, to be answered for each case by itself, according to the nature and condition of the soil and of the trees. No general solution can safely be more explicit than the following, which I offer; that probably most orchards which have lain long in sward will be benefited by loosening the turf and turning a new surface up to the sunlight and the air; and some will thrive best when this is repeated oftenest; but the crop cultivated, if any, should be that which is least exhausting to the soil. POMOCULTOR.  
—*Wisconsin Farmer.*

#### Egeria Prevented.

DR. WARDEN:—In the April No. of your Review I see coffee grounds recommended as a preventative to the depredations of the

peach worm. I have tried the following method for some twelve or fifteen years without losing a *single* tree that was thus protected. Soon after setting the tree sometime—in the course of a year or two—I remove a little dirt from about the foot of the tree, say the width of a hoe, two or three inches deep, and put from four to eight quarts of *leached* ashes in its place, heaping them up the body *above* where the earth will ever come by cultivation, and stamp them down hard against the tree.

This I should think less trouble than the coffee grounds. One common “leach,” used for making the soap of a family, would serve a great many trees.

The prospect for fruit is very fine, and we anticipate abundant crops. Will you not visit us this summer, and help us to enjoy the products of our orchards and vineyards? Do use your energies to secure better packing of the grape-vines sent from your dealers. The tender roots reach us by *express*, at heavy charges, perfectly dry and dead, for want of proper care in putting up. This is abominable, and can not be borne by customers. A loose bundle of young vines put into an old bag with a little straw, and loosely tied, is no protection; they should always be mossed and boxed securely, and a charge made for the extra labor will be cheerfully paid by the purchaser. A. K.

KELLEY'S ISLE, April, 1853.

#### The Fruit Prospect

Is generally good throughout the Mississippi valley, so far as appears from an extended examination of exchange papers, and numerous correspondents. This is agreeable intelligence to all, but especially to pomologists, who, it is hoped, will industriously embrace the opportunity of studying fruits; the attention of State fruit committees is particularly directed to this, and all are urged to make critical notes of fruits as they ripen, so as to obtain data for the reports to the national body.—Ed.



## The Vineyard.

### VINEYARD CALENDAR FOR JUNE.

THE vigorous growth of the spring and early summer months, will give us much to do in the vineyard; there is a growth of vines to be checked and regulated, and also abundant crops of weeds which must be kept at bay to prevent their robbing the vine. Supposing that all the duties of the season were faithfully discharged in May; that the ground, if not earlier tended, was then turned over, burying a rich coat of green manure, and that the rampant shoots were duly nipped in, as they began to show undue proportions, we shall now enter the leafy month of June, with the prospect of full occupation before us.

*Tying.*—This operation, advised to be attended to last month, must still continue to claim the vigneron's attention. If he wishes to preserve his young shoots, rich in promise of fruit for this year, and wood for the next, let him be especially jealous of all intrusions, and provident against injuries. To this end he will frequently pass among the vines with the wisp of damp rye straw, cut into lengths of about twenty inches, and as fast as the shoots grow he will tie them up to the stakes. This operation should be repeated every week or two; for the union of the new and old wood is so feeble at this stage of growth, that the least force will rupture the connection, and sacrifice the rich prospect.

*Sprouting and Thining.*—The regular and luxuriant breaking of the buds this season, will demand unusual attention to the process here indicated. the excessive shoots should have been thinned during May, and must not be longer neglected; those which were spared at the past thinning, to provide against accidents, hail and insects, must now be removed, as great injury would accrue to the whole crop by leaving too much fruit upon the vines. All weak shoots, duplicates and those not provided with fruit buds, must be removed, or at least pinched in. Observe especially to provide wood for the next year, and so arrange your summer pruning that two good shoots shall grow out from the lower part of the bough and stock. If from any accident your low shoots are deficient, or if the stock from previous neglect have become too tall, now will be a good time to select the strongest shoot among those commonly called water sprouts, which come out from near the ground; this may be grown for forming the *spur* in next winter's pruning, all others should be rubbed out, though as this is generally long-jointed, it will be unfit to use as a bough for bearing wood.

*Pinching in.*—Recommended for May, must still be continued; if this process have been neglected before, or, more especially, if it has been too severely practiced, as in the

latter case, the force of the vine will be throwing out laterals to make up for the shortening. Do not however be too severe in your treatment of these *kites*; shorten them in to one or two leaves, rather than to tear them out as is commonly practiced; the growing fruit needs shade and healthy leaves. On the canes it has been advised to remove the laterals from the length of wood to be used next year, and to allow all beyond to grow. In this, as in other processes, it is urged by some to avoid interfering with the vines when they are in blossom, especially during wet weather.

*Cultivation*—Is to be continued as far as necessary to keep the surface clean. The cultivator may be passed through the rows, or in hand dressed vineyards a light hoeing may be done, simply to kill the weeds, using a sharp tool, always recollecting that a shallow culture is considered best in the summer treatment of vineyards.

*Thinning* the grapes should be attended to. Let no one injure his crop by avariciousness, or he must necessarily suffer by such selfishness, not only in a deteriorated wine, from badly ripened grapes this year, but will inevitably injure his vines for future seasons. It is not easy to say how much fruit may safely be left; this must be decided by the judgment of the vine-dresser.

*The Rot*.—This malady may occur toward the end of the month, if there is much wet weather. Continue closely to observe its peculiarities and attendant circumstances, in order to obtain, if possible, more light upon this abstruse subject.

*Insects*.—Must be closely watched, and a war of extermination should be constantly waged against them. A large yellow beetle is supposed to injure the young shoots early in the season. He practices an injudicious shortening in; a worm is accused of the same mal-practice. During this month a small gray beetle, allied to the rose-bug,

often seriously injures the leaves by eating the tissues from their upper surface; they occur in large numbers, and as they trace irregular characters on the leaf, they are termed in Europe, *Ecrivains* (writers); they may be shaken off into buckets of lime-water, as recommended by Mr. Buchanan, and thus to a great extent destroyed.

#### Grapes in Carolina.

THE varieties in cultivation are very numerous, but it will suffice for the present to mention a few of the best; and in doing so, I shall confine my remarks to those which experience has shown to be most adapted to our soil and climate.

The *Isabella* is the earliest and among the best table grape with which I am acquainted. The clusters are large and compact—the berries large and oval in form, and of a deep purple color when fully ripe. The flavor is exceedingly rich and musky. It thrives well with us, and is probably a native, as it bears the name of a lady of our State, Mrs. *Isabella Gibbs*, whose husband first brought it into notice.

The *Bland's Madeira* is next in season. Its clusters are not so large as those of the *Isabella*, and are less regular in form—the berry is large and round—it becomes pleasant to the taste as soon as it begins to change its color, and gradually improves until, assuming a deep purple color, it is of a flavor unsurpassed in its full maturity. It affects the shade more than other varieties, and if exposed to the full influence of the summer sun, will soon wilt and become insipid; but properly protected, it will retain its plumpness and fine flavor for a considerable period. The vine grows most vigorously, and bears early and bountifully. It readily adapts itself to any kind of soil from a warm sandy ridge to a cold damp clay. The fruit, I believe, is proof against the rot and mildew. The honor of its origin is claimed for Virginia, and it was probably introduced among us by the earlier immigrants from that state.

The *Lenoir* ripens a little after the *Bland*. The clusters are long and very compact. They are well shouldered. The berry is quite small, and nearly black when fully ripe. The flavor is very rich and sprightly, supe-

rior to that of any grape I ever tasted. The fruit, if undisturbed, will remain on the vine until October, and I have seen it in full perfection up to the time of white frost. The vine is vigorous and hardy, but requires a warm soil to bear well. There is considerable diversity of opinion as to the history of this grape. Downing ascribes its discovery to Mr. Leroir, of Santee, whilst the old North State claims it as her own, along with the Catawba Scuppernon, and a host of others. Nor am I surprised at this contention about the honor of its production, it is of such an admirable quality. The following statement I have from a gentleman well acquainted with the circumstances of the case, and it may serve to throw additional light on the matter at issue between high contending parties. Many years ago, when the late Col. Abram Blanding was a practising lawyer; in passing from Camden to Sumter in attendance on the circuit court, he observed a grape-vine growing in a waste place that was known as Lanoir's old field. Upon trial, he thought it worthy of propagation. Hence the name by which it is now known, and the source from which it sprung. The probability of this account is further sustained by the fact, that Col. Blanding was just the man to observe and appreciate a thing of the sort. His taste for arboriculture is well known to all who knew him; and Columbia has reason to be proud and grateful that she ever ranked among her citizens such a lover of nature; for to him is due all the honor of the beautiful oaks and evergreens which adorn her streets. He richly merits a monument at her hands—but I am aware that such notions are considered old-fashioned now-a-days.

One of the chief merits of this fruit is the ease with which it is propagated. A cutting with four or five buds, placed in a damp spot and properly attended to, will make a bearing vine in three years. Its after cultivation requires but little attention beyond keeping the ground loose around the roots, and an occasional dressing of manure. It should be moderately pruned every spring, before the sap rises. An arbor or trellis should be provided before the vine runs much—or if these be considered too expensive, a capital substitute may be found in a cedar, cut off near the ground, and its branches somewhat reduced.

LANOIR.

#### Shanking of Grapes.

I HAVE a viney on the side of an old sand-pit, in a situation so hot that I thought all the Frontignan and Muscat grapes would ripen without fire-heat, particularly as the soil is everything that a vine loves—a loose calcareous sand, in which *Hamburgh* vines, growing in the borders in the open air, will make shoots twenty feet long, and even ripen their fruit in hot summers, the bunches lying on the ground. Well, in the first crop my vines had, I found, only a few of the *Frontignans* ripen, the remainder all shanked off and were worthless. I thought it must be owing to a current of water, the result of a thunder storm, which made its way on to the borders toward the end of summer. I was satisfied I had discovered the cause, and took means to prevent any more currents of water making such mischief. The second crop came in due course, and again my *Frontignans* were shanked. I imputed it to want of ventilation, but was not quite satisfied that I knew the cause. When the third crop made its appearance, I had air given in abundance, night and day, yet again my *Frontignans*, *Chasselas Musque*, (or *St. Albans*) *Muscats*, and indeed all the *Muscat* race were shanked. I could not blame the border, nor want of ventilation, for the following most cogent reasons:—A vine of the *Chasselas Musque* is planted in the house, in the back border, which border is raised three feet, and of course, from being under the glass, is perfectly dry. The grapes it has borne have hung close to one of the ventilators, and in common with all the grapes of the same sort and same (*Muscat*) family, in the same house, they have always been shanked and worthless. The *Hamburgh* and other sorts have invariably ripened well in the same house. *Frontignans* and *Muscats*, growing in a house within twenty yards of the above, with fire-heat and abundance of air, never shank, and always ripen well. Now I deduce from all this, that lowness of temperature is the main cause of shanking, and that its cure, the borders being in decent order, is gentle fire-heat and abundance of air.—*T. Rivers, Sawbridgeworth Nurseries.*

VINERIES.—Growing grapes under glass is becoming more general in this neighborhood.

## Transactions.

### THE CINCINNATI HORTICULTURAL SOCIETY.

THE meetings of this Society have been maintained during the past month rather for discussion than for exhibition. It was very much to be hoped, and is earnestly desired, that the good people of our city should take a deeper and more personal interest in this excellent institution. We have a reputation for horticulture which must be maintained; but independently of all love of approbation in the matter, our Society offers much through its library, discussions, distributions, besides its exhibitions, which is well worthy of the attention of all citizens, whether they be personally interested in the cultivation of the soil or not, and should be brought home to the appreciation of hundreds, who now merely attend the great exhibitions, but who, in justice to themselves and to society, should take a deeper interest by uniting in the work, or at least by giving their names and money. Our members should be counted by thousands.

In support of these views, let it be asked respecting our famous markets, which have now been resplendent with beautiful flowers from day to day, since the departure of old winter, while the stalls are heavily laden with the most luxuriant vegetables, and filled with a profusion of fragrant strawberries, and other fruits in their varying season, at prices bringing these luxuries within the reach of all. What do we not owe to the efforts of the members of the Cincinnati Horticultural Society?

The greatest efforts of the present season have been the improvement of the *water-works* grounds, which are highly creditable; and the memorial to Council to provide parks and boulevards or avenues for the adornment of the city, which can not fail to exert a beneficial influence upon the health and morals of the city, as well as improve the neighboring property and the general character of the city, if our rulers can only be induced to carry out the plans suggested.

The exhibitions of flowers, especially roses, and the displays of strawberries, toward the end of May, have been very creditable.

#### The American Wine-Growers' Association

MET at the house of L. Reh fuss, president, on Saturday, March 26th, when the president read a very interesting paper upon the circulation of the sap—reported in the last number of the Review. The subject was discussed freely, and the old doctrines supported by some of the members.

The session was closed by an examination of some choice specimens of Catawba, which were very creditable to the care and skill of the makers.

They again held their regular meeting at Horticultural Hall on Saturday, April 30th, 1853. Dr. Reh fuss presiding.

After reading the minutes the officers reported that they were preparing the communication to the World's Fair at New York, on the wine statistics of our country.

The discussion of the theories of the sap was resumed with exceeding animation, each party urging its peculiar views with great spirit.

The President read a correspondence with the Imperial Agricultural Society of France, and the report of the committee of that learned body upon the wines sent from Cincinnati—from which it appeared that they have felt highly pleased with the products of our vineyards, and they also speak in very complimentary terms of the discrimination evinced by our vine-dressers in selecting *native varieties* of the grape, and by their having had the ingenuity to discover their ability to produce a sparkling wine from the product.

Mr. Reh fuss presented a catalogue of foreign grapes, which he had received from Europe. This list embraces some of the best varieties of the grape, and it is hoped that some of these may prove useful in this region.

#### Brown County Association.

Dr. WARDER:—In compliance with your desire to know something about the Independent Agricultural, Horticultural, and Me-

chanical Association of Brown county, I would briefly state that it was organized on the 18th of February last. Several of the most prominent members were the original projectors and founders of the Brown County Agricultural Society, but in consequence of disagreement among the members a division took place, and the result has been the organization of another society more comprehensive in its sphere of action, indeed it may appear, on first view, too comprehensive; it may be thought that agriculture, horticulture, and the mechanic arts are too incongruous occupations to be incorporated under one association, but we think that on more mature consideration their mutual dependence and harmony will be apparent. We hope to make horticulture a prominent feature of the association, and are most happy to avail ourselves of the assistance of one of your large experience in that department. We flatter ourselves that we have the raw material, out of which we will be enabled finally to build up a respectable society. The farmers of this county have, for the last few years, been paying considerable attention to the cultivation of good fruit, and the ladies about our towns and villages are giving more attention to the cultivation of flowers; they are introducing among us rare and beautiful plants and flowers, procured from the gardener's of your city, and we have already realized some of the "first fruits" of our anticipated horticultural show, which is to be held at Ripley on the 16th day of June. Yours respectfully,

ALEX. CAMPBELL.

RIPLEY, May 18th, 1853.

Allusion has heretofore been made to the energetic gentlemen of Brown county who are interested in this affair, and success is anticipated for their enterprise.

#### **Pennsylvania State Fair.**

By a circular from the excellent Secretary, Robt. C. Walker, it appears that he, at least, is determined to stir up the good people of the Keystone State. The arguments advanced are admirable, and can not fail to exert a good effect; it is confidently anticipated that Pennsylvania will do herself great credit in the last week of September, when the adjoining portions of Ohio and Virginia

will no doubt participate in the emulation to be manifested at Pittsburg.

#### **Indiana State Board of Agriculture.**

At the May meeting of this body it was determined, by a close vote, as appears from the Farm and Shop, to hold the next State Fair at the city of Lafayette, in Tippecanoe county, on the 11th, 12th, and 13th days of October next. A deputation of gentlemen from Lafayette, and another from the city of Madison, laid before the executive committee proposals which proved the existence of a high degree of enterprise and liberality among the citizens of their respective places.

Lafayette is surrounded by a fine agricultural region; and by means of the Wabash river, the Wabash and Erie canal, and railroads running north and south, the city may be conveniently visited by citizens from all quarters of the state.

A liberal premium list, amounting to about \$2,500, will be presented, a portion of which is in agricultural works and periodicals.

#### **Zanesville Agricultural Society.**

This county society is taking active steps in the preparation of their grounds for their fall exhibition. At a late meeting, a horticultural committee was appointed, consisting of Messrs. C. Springer, Jas. L. Cox, Hiram Rogers, Austin Berry, and J. Bernard, who held their first meeting on May 14th, at which time they made a creditable display of flowers and vegetables.

#### **Agricultural School in Virginia.**

SEVERAL enterprising planters in Loudon county, Virginia, have agreed to establish a model farm and agricultural school in that county. The land has been purchased, and the buildings will be erected during the summer. Hurrah for old Virginy!

#### **Illinois State Agricultural Society.**

NOTICE has been given that the executive committee would meet at Springfield, on the 25th of May, for the purpose of making definite arrangements for the time and place of holding the first State Fair.

**Mobile Horticultural.**

MUCH spirit appears to have been displayed by the gardeners of this city in anticipation of their spring exhibition, to be held on the 24th ult. Apprehensions were however entertained that the severe drought would sadly curtail the richness and abundance of the articles to be exhibited.

**North Carolina.**

THE State Agricultural Society just held a meeting at Raleigh, to make preparations

for holding a State Fair, in October next.

A meeting of the citizens of this town has also been held, at which ex-Governor Manly took an active part.

A committee was appointed to carry out the will of the meeting, in selecting the site, fitting up the grounds, and raising subscriptions. It was determined that \$5,000 was to be raised, half of which should be paid by the city.

It is hoped that this state will come into rank right handsomely.

**Editorial.****TO THE GENTLE READER, AND TO ALL WHOM IT MAY CONCERN.**

YOUR patience and kind consideration are invoked by one who feels and knows that he has need of them, while continuing to present himself before you in these pages, crippled and borne down by sickness, so that he is entirely unable to prepare for you such a repast as you are entitled to expect at his hands. By the aid of a devoted friend, the present and some previous numbers have been prepared for your perusal. My personal efforts in your behalf have been reduced to the lowest modicum, in consequence of inability, for some months, to read or to write with my own eyes; faults of omission and commission will therefore be kindly overlooked by you when you consider that I should be filled with feelings of thankfulness at my ability even thus to address you. For some time I had apprehended that it would be necessary to suspend the work, and issue merely an apologetic circular in the place of this number.

It may be well here to allude to the approaching terminus of the third volume, which will complete the curricula of three years of most agreeable intercourse between myself and you, and to assure you of my hopes that it may be long and pleasantly

continued without interruption by sickness on my part, while upon yours no indisposition may be manifested, I trust, toward an increasingly liberal support of my efforts, which I hope to have aided and established by a competent and energetic publisher, without which, indeed, it will be impossible for me to continue laboring in your behalf.

**Love-Sick Potatoes.**

AMONG all the various theories to account for the potato malady with which the world has been favored by writers upon this fruitful subject, here is something which appears to have at least the merit of novelty. A European philosopher with an Italian name, has presented to the savans of Vienna a fanciful theory and the appropriate remedy. Like our own Mr. Goodrich, he has observed that the potato, after centuries of cultivation, by means of extension or subdivision, had nearly ceased to make any efforts for the continuation of its species in the more natural way of reproduction by seed. This power of increasing by offsets, or stolons and tubers, which is also possessed by many other plants, he calls the *double sex* of the potato, and attributes the disease to the facts,

that the species has been kept all this time *alegue marita*—in a vestal state—while, of course, he justly considers injurious to health. Now for the suggested remedy : To contract intimate alliances of a conjugal character with the potentates of the earth, natives to the soil of Europe, in which the fair Columbian has so long retained her vestal purity !

Dr. Malfatti thinks he has thus made some valuable discoveries in regard to the potato. It appears from the proceedings of the Royal Agricultural Society that this gentleman has planted pieces of potato in juxtaposition with roots of other nonallied plants, such as the *Helianthus tuberosus*, *Cyclamen*, and also *Cardium Esculentum*, which is not even tuberosus. He asserts that the potatoes grew vigorously, appearing to derive health from the adjoining plant, and absorbing their very flavor, while the tubers produced were entirely healthy, though the stock planted was defective. In one instance, he states, that the potato was restored at the expense of the nurse plant, which became diseased.

Now I look upon this statement as simply fabulous, for although the cut surface of the potato planted, might have absorbed the peculiar juices of the other root, the new tubers produced during the season, could scarcely contain other proper juices and elements than those peculiar to the potato.

#### Vernal Flowering Shrubs.

THE present season though a backward one, having been preceded by a mild winter, and having no late frosts has been very favorable for the development of early flowering plants, many of which have been more beautiful than heretofore.

*Forsythia viridissima*.—This luxuriant Chinese shrub has shown its full beauties ; when well grown in pyramidal form, its branches were perfectly clothed with delicate yellow pendant blossoms, enlivened by

the green leaves bursting forth before it was out of bloom. 'This plant has been freshly propagated, and is highly commended even though it should not bloom every year.

*Wiegela rosea*.—This other beautiful celestial, for which we are also indebted to Mr. Fortune, can not fail to grow upon the affection of all beholders ; the strong little branches are studded thickly with vase shaped upright bells of a beautiful rose color ; it has proved to be perfectly hardy, and every way worthy of more extended culture ; in fact no collection can be complete without it.

*Spirea prunifolia*.—One of the very prettiest of this very beautiful family, also from the far-off "flowery land." Indeed we are deeply indebted to this enterprising botanical traveler for very many contributions from that wonderful region, besides those here noted. This *Spirea* is a free and vigorous grower, with slender and graceful branches, which are in early spring densely clothed with beautiful, small, double, white flowers, each being in itself a perfect miniature rose. This plant is propagated with great ease, and perfectly hardy ; and must be a universal favorite as it is indispensable.

*Spirea lanceolata*, or *Reevesii*, is another beautiful variety of this most interesting family of hardy shrubs of an entirely different style of bloom to the preceding, and succeeds it at an interval of about a week.

*Halesia tetraptera*, or Silver Bell, has given infinite satisfaction this season, displaying a profusion of its graceful pendants, which have not been disturbed by frosts, but have been allowed to hang, and render this beautiful shrub peculiarly attractive during its period of flowering.

*Ptelia trofoliata*.—Speaking of the Silver Bell reminds us of this beautiful native which is entirely too much overlooked ; for though its glaucous white flowers will not compare



in beauty with the pure white of the *Halesia*, it is still well worthy of attention, and during the summer exhibits its bright green inflated capsules, which are ornamental.

*Mahonia aquifolia*.—This evergreen is growing vastly in popular favor, so that our nurserymen will find it difficult to keep pace with the demand; its prickly foliage resembles the Holly, but it is a low straggling shrub, well adapted to low planting, in groups of other shrubbery, where it will beautifully exhibit its closely set thyrsi of bright yellow flowers, that expand early in the season followed by scarlet berries which are retained until autumn; its celiases all other members of the Barbery family. Its preserved fruit was exhibited at the American Pomological Society, last September, from M. Leroy, Angers, France.

*Cheionanthus virginianus*.—The Fringe tree, both broad and narrow leaved, is universally admired, as it throws its delicately cut extended petals to the vernal breeze. It is not easy to imagine anything more aerial than the living fringe of purest white, presented by this shrub, which I rejoiced to meet growing on the upper portion of the Arkansas river.

*Magnolias*.—The richly colored Chinese Purple, and its superior, the Soulanguiana, have never exhibited a more luxuriant and abundant display of their magnificent blossoms than during the past spring; too often their large protruded buds are nipped by the frosts of March, as they begin to expand. The *Conspicua*, with its pure white flowers, is also an early bloomer, but continues to be a rare plant.

*Cydonia japonica*.—The well known *Pyrus japonica*, brilliant with its scarlet flowers, is among the first to greet us in the early spring. I felt its cheering welcome at Little Rock, during February. Its half-sister, *Cydonia japonica alba*, with its large delicately

flesh-colored flowers affords a fine contrast of color.

*Amelanchier botryseum*.—The Service being a modest nature must not be overlooked in this hasty recital of vernal flowering shrubs. Its form is very graceful, and though a single blossom is not characterized by the features of a florist's flower, the shrub, when clothed in its white drapery, presents a light and feathery appearance. Leaning out from the bare rocks which rise in bold cliffs on the Arkansas river, it formed a fine contrast with the dark evergreens with which it was associated, as I beheld them upon the first of March.

*Tamarix africana* is another new and very beautiful hardy shrub, very distinct in general appearance, the branches being a perfect, light, feathery wreath of delicate pink blossoms, which appear before the leaves.

*Ribes aurea*, *Gordoni* and *sanguinea*: The first of these is so common as to be known and loved by all, and yet its early bloom and exquisite fragrance are characters of too much importance to allow its being overlooked; its habit may be much improved, and its bloom rendered more profuse by judicious summer pruning.

The *Gordoni* is destined to become a favorite, and it has deservedly attracted much attention; but, alas! for the *sanguineum*, it has heretofore proved too tender for our variable winters, so that we must be deprived of the pleasure of enjoying its crimson flowers, unless we may take a hint to advantage from the suggestion of David Thomas at page 397, and be able to preserve it by planting in different soil and exposure, so that it may be less liable to injury.

*Fibernetum lantanoides*.—This shrub deserves much more extensive culture than it has yet received; it is perfectly hardy, and

early in the season throws its handsome corymbs of pure white flowers that resemble those of the laurustinus of the green-houses.

*Wistaria sinensis*.—The Consequana tho' not a shrub may be trimmed into that form. It is naturally a luxuriant vine, which, when it acquires sufficient age, and after it has clothed itself with short branching spurs, constitutes one of the most truly beautiful objects which can be conceived of, for the decoration of a wall, a porch, an arch or other frame work, or even in the wild luxuriance of nature, twining itself among the branches of a tree. Its immense pendant racemes of delicately purple blue flowers, are exquisitely attractive, and are universally admired by all beholders.

When I sat down to prepare this notice, it was with the intention merely to make brief mention of a few flowering shrubs, whose introduction has been comparatively recent, which have been injured by frost some seasons, but which have been so peculiarly beautiful this year that it was feared some of our citizens had failed to observe them in their visits to the gardens, and they are therefore now mentioned for the benefit of the near and distant reader. This brief mention has extended to quite an article, though nothing has been said of many other vernal beauties of the same class; the Double Flowering Almond, Peach, Cherries and Apple in their varieties are too attractive to be passed unnamed.

#### Ohio State Fair.

THE executive committee have been actively engaged in the neighborhood of Dayton in making arrangements for the great jubilee of September 22d, when the farmers of the western, as well as those of other parts of the State will have an opportunity of exhibiting the glorious productions of their fertile soil. The mechanics will also make a

handsome display, especially in the department of agricultural mechanism, which is daily advancing in importance. Horticulture and pomology will not be forgotten, and with a season so promisingly auspicious as the present, we may anticipate most abundant contributions. It is announced that the Hon. James A. Pearce, of Maryland, will deliver the annual address.

The committee have made choice of a site for the next annual exhibition, embracing thirty-four acres, most admirably adapted to the purpose. The entrance is on the brow of an elevation ten or fifteen feet above the level, on which the halls and other necessary buildings will stand, so that the plan of the grounds, and the entire exhibition, may be seen at a glance. The point of exit will be at the northeast corner, which may be reached from the place of entrance by any one of the several thirty feet drives passing through and around the grounds. The whole is to be enclosed with a tight fence thirteen feet high.

#### Fairs in Kentucky.

THE agriculturists of this State are determined to pursue a course of honorable rivalry. Fairs are proposed for the coming season, as usual, at Paris, Bourbon county, where the eighteenth annual exhibition of their ancient society will be held on the last four days of September.

The spirit is progressing in another direction, and arrangements are making for the organization of a society for northern Kentucky, and preparations are being made for a great fair to be held in the neighborhood of Maysville next autumn. Our neighbors over the river have not yet adopted a State organization, but their societies embrace large districts of country, and that in Bourbon county has long been famous for its handsome display of fine stock.

**Indiana State Fair.**

From the Ohio Cultivator it appears that the executive committee in our sister state have determined to hold the Indiana State Fair at Lafayette, in October, from 11th to the 13th.

From previous information we had supposed and published, that this jubilee would have occurred at an earlier period at Richmond, immediately ensuing upon the Ohio State Fair and concurring with that of Michigan. The present arrangement will probably be most advantageous, and will furnish an opportunity for the development of resources of the fertile valley of the Wabash, while the change of time will prevent the unfortunate conflicting of time previously alluded to.

**Pennsylvania State Fair.**

By a spirited circular issued by the Secretary, Robert C. Walker, the farmers of the Keystone State, are addressed with forcible arguments to induce them to exert themselves in behalf of the approaching State Fair. Pennsylvania is noted for her agriculture; her fine farms and rich valleys are a fruitful theme for all travelers, and she was among the earliest to lead off in the cause of agricultural improvement, by means of societies for the diffusion of this kind of knowledge, but some how she does not appear to have kept up with her successors in the race of agricultural advancement. Let us hope, that with such men as those now interested in her agricultural improvement, and with the abundant material prevailing throughout the state, the approaching Fair at Pittsburgh, will be every way worthy of her and them.

A kind friend in sending the circular informs me that a good spirit prevails in that neighborhood, and that high anticipations are entertained for the success of the exhibition to be held on the 27th of September.

**Trial of Implements.**

It will be recollected that the State board propose holding a trial of agricultural machines near Wooster, Ohio, early in July, the day to be decided in accordance with the ripening of the crops. This is a very important meeting, and will undoubtedly attract great attention; it is therefore trusted, that the most comprehensive arrangements will be made by the executive committee, to make a thorough test of the excellence of the machinery in competition. Various implements will no doubt be presented, as at the interesting occasion at Geneva, New York, last year, not simply grain and grass cutters, but threshers, separators, cultivators, drills, etc., etc. But among all, the farmer will receive most attention, for, since the excellent secretary Johnson introduced McCormack and Hussey at the great exhibition, the world has learned that there are other mowers and reapers worthy of attention.

**Chairmen of State Fruit Committees.**

GENTLEMEN occupying the honorable position alluded to, are earnestly requested to begin early in collecting the data for their reports to the American Pomological Society, which will hold its third meeting in Boston, October 1854. You have a great work before you, and much is expected at your hands; in your reports, the society shall look for full accounts of the condition of pomology, and the success and extent of fruit-growing in your respective states, so that we may be able to present to the world a comprehensive statement of the condition of our favorite subject.

A good example has been set by Thomas Affleck, of Washington, Mississippi, and Thomas Allen of St. Louis, Missouri, and perhaps others, by giving notice in their local newspapers, of their desire to receive information from all interested in the subject; their example is worthy of imitation.

It might be suggested to these chairmen, that they exercise their privilege of appointing their coadjutors as soon as efficient and reliable men can be selected, so that each may feel he has a part to perform in the work; we may then hope to have extended observations, but condensed reports which will be a desideratum in the pomological literature of the society. It is further suggested that all gentlemen who have received the appointment of chairmen should at once determine to act or immediately communicate their declension to Samuel Walker, Esq., general chairman, Roxbury, Massachusetts. A list of the chairmen was presented some time ago in the Review, and, for convenient reference, has since been retained on the second page of the accompanying advertising sheet.

#### **The Ailanthus and Abele.**

I AM glad to find my friend Hovey stepping forward in defense of these two doomed trees. Their prostration, dictated by our lamented friend Downing, never met my cordial support, and I am happy to see that the people of the United States have not too hastily adopted the suggestion. These trees, like many others, are open to objection, but they are possessed of many excellent, good qualities, and deserve a suitable share of attention. We can not do without them, and in some situations they are almost the only trees that can be successfully planted. With Mr. Hovey, I should advise, "not to destroy trees already grown up, unless already too thick, but to use more judgment in the selection hereafter; recollecting that neither the elm, the ailanthus, the abele, the lime, nor the siver maple, are all the trees suitable for streets or avenues.

#### **Augusta Rose.**

THANKS to the proprietors of this new rose, about which so much anticipation has been

excited, a nice, healthy, budded plant has been received. It will have been observed in the advertisers accompanying previous numbers that this novelty is now ready for delivery, and we doubt not it has ere this been widely distributed throughout the United States. Having never seen the flower, I shall quote Mr. Hovey's notice of it from his last number: "We have seen only specimens of the rose, which were brought from Syracuse, and therefore were not in fit condition to form an opinion; but, so far as we could judge, we consider it quite an improvement upon solfaterre, as it is said to bloom more freely, and to be of a deeper yellow. As soon as we have flowered it in fine condition, we shall notice it again."

#### **The Southern Cultivator.**

IN reading the May number of this racy periodical from the sunny south, I found it more than usually welcome, not only from its varied and useful matter, but because its sprightly editor has evidently been a-May-ing in those delightful regions of northern Georgia, which he so beautifully describes, as to make even a poor invalid wish to don his traveling gear, escape from the doctor's, and witness, with him, the floral beauties of the southern forest, as well as to realize the "spirit of improvement" he finds so manifest on the "track of the railway." Indeed, we in this part of the Ohio valley, have, for years, been anxiously looking for an outlet to the Atlantic through the mountain-passes of east Tennessee and Georgia, and were at one time confident that the object of our wishes would, ere this, have been achieved. The bright anticipations of visiting that favored region are rendered more impressive by the gloomy description that Mr. Richmond gives of Devon farm, and its accompaniments, and the brilliant career as a southern farmer, which has been marked out by my

early friend, R. Peters, of Atlanta. Our readers will perceive that we have extracted from this paper a valuable article upon southern peaches, by a veteran pomologist, William N. White of Athens, Georgia.

#### Farm School in North Carolina.

From the *Southern Weekly Post*, it appears that Dr. John F. Topkins, the able editor of the *Farmer's Journal*, proposes to establish an agricultural school at Bath, in the county of Beaufort. His thorough acquaintance with the subject of agriculture and the kindred branches of science, together with his known energy of character, will go very far toward accomplishing success in this new and untried experiment. We heartily wish him success.

#### Bowling Monument.

A circular has been received from Mr. Wilder, General chairman, requesting those who were appointed agents for obtaining funds for the erection of this testimonial of respect, to complete their collections in their respective districts, and make return thereof to him on or before the 4th day of July next. Let us hope that energetic and successful efforts will be made in consummating the design set forth in the original circular.

#### Roberts' Potato Cure.

The plans of this discoverer, offered to the world for a consideration, have recently been presented to the Farmer's Club, of New York, for their investigation. The agent of Mr. Roberts presented the subject appropriately, admitted the prejudice which existed against a secret remedy, but urged the importance of the subject, and the necessities of Mr. Roberts.

After some discussion, during which it was urged that the disease was on the wane, and that experiments might be fallacious, the

matter was referred to a committee, who made the following

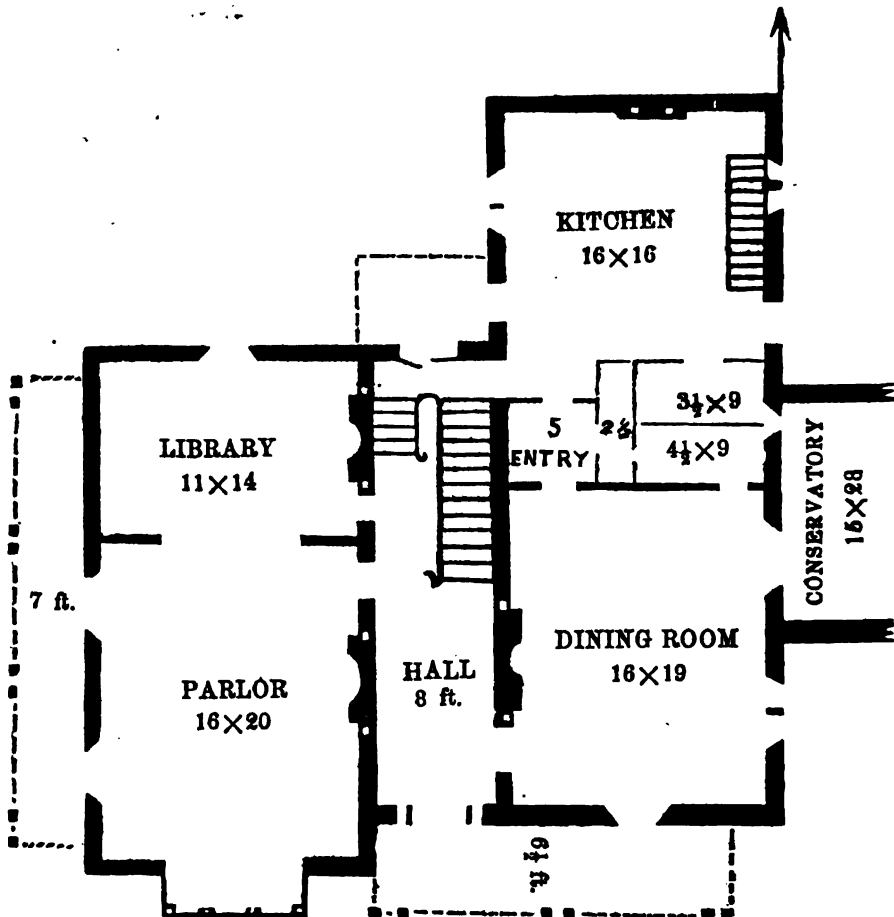
*Report.* That the plan proposed has novelty, and bears indications of truth peculiar to itself. The hypothesis is of such character as to warrant the experiment under the hopes of its doing away with the potato disease. We would recommend to members of the Club to try the directions of Mr. Roberts at the price asked, and repeat his experiments. The results exhibited are evidently of a greater specific gravity than other potatoes now generally grown, and exhibit other evidences of improved quality.

SOLON ROBINSON, and JAS. J. MAPES.

At a subsequent meeting the potatoes were cooked, and pronounced excellent. The *Prairie Farmer* decries the secrecy and shrewdly doubts whether it will realize much remuneration, but speaks favorably of the plan as one likely to be followed by good results. Mr. Roberts' pamphlet and secret are sold for \$1.

#### Iowa Farmer.

A new agricultural periodical with this title has made its appearance with the smiling month of May. Its tone is modest, yet manly and independent, and though the editors do not boast of themselves, they hesitate not to give the world a most exalted opinion of the soil and productions of Des Moines county, of which, among other things, they say "that it stands pomologically ahead of any county in the whole West." The farmers of Iowa are enterprising—more than that, many of them are intelligent; and the legislature has already provided liberally for the aid of county organizations; these, with the Southern Iowa Horticultural Society, of some years standing, will no doubt soon combine to form a State Agricultural Society? This monthly is conducted by J. W. Grimes, and J. F. Tallant, at Burlington, Iowa, at \$1 per annum, with liberal reduction to clubs,



#### THE FRONTISPIECE,

THE frontispiece for this month is a finely executed portrait of a newly erected cottage, the property of Mrs. A. A. Warder, Springfield, Ohio, and will add greatly to the attractions of that beautiful interior village, which has always been much admired by every visitor who has there sought a retreat from the heat and dust of the city.

This building is admirably adapted to the site, which is one of those beautiful swells abounding in that lovely region. Surrounded by trees, the irregular outline of the edifice presents finely in many directions,

while the ground, falling gently from the house, enables the resident, through open vistas, to enjoy beautiful views of field, prairie, and woodland on the one hand, and the cheerful and busy village, with its tapering spires, on the other; while from this delightful situation the turnpike roads and railways which traverse the landscape, enliven the scene, and bring you in constant relation to the busy world beyond, toward which they are bearing the rich products of this fertile valley, and the results of industry from its mills and manufactories.

The interior is adapted to the comfort and convenience of its occupant, and, as will appear from the adjoining plan, contains great accommodation and no waste room. The ground plan of the first floor is here given, from which the reader may learn the sizes and proportions of the various parts. On the front, facing the south, a light veranda shields the capacious entrance, while the beautiful large bay window, projecting from the parlor, enables you to enjoy the lovely views, in different directions. The west windows of this room are also protected from the afternoon sun by a light and graceful ombra, to be covered by climbing vines—Large sliding doors form a communication with the library, which is furnished with softened light from a northern window—On the east the dining room opens into a conservatory of twenty-eight by fifteen feet, with a fine southern exposure.

A beautiful feature in this house is the finish of the interior woodwork, which is of clear pine, smoothly worked, and then coated with oil and varnish; this brings out the natural grain of the wood and renders the plain pine much more ornamental than if painted, and the luster can at any time be renewed by a coat of varnish. A fine easy stairway rises from the hall, in which the white ash and the dark walnut form a fine contrast. Commodious closets are distributed throughout the building.

The second story contains five chambers, dressing room, and bath room, and the attic has two good chambers, a large drying room furnished with ventilator and suitable store room. In the basement are the office, scullery, dairy, furnace room, and two good vegetable cellars, with hard cement floors. The walls throughout are provided with flues, for ventilation and warm air.

One of the copious springs which give name to the village, drives a hydraulic ram

which forces an abundant supply of water to any part of the house.

#### The Farm and the Shop.

THIS is the title of a semi-monthly quarto which has recently made its appearance from Indianapolis. It is conducted by O. F. Mayhew and John B. Dillon, the latter of whom has acted as agricultural secretary of the State. As indicated in the title, this sheet is devoted to the interests of labor, and it can not be doubted will find a field of usefulness. Our neighboring State is fertile in papers of this class: the *Indiana Farmer*, from Richmond, is in its second summer; the *Plow Boy*, of Fort Wayne, fresh and ruddy, is entering his first harvest field; and this, from the capital, commenced in March, and is the neatest of all. Why can they not unite with advantage to all parties?

*A New Periodical.*—The American Botanist, a monthly journal, devoted to physiological, geographical, pictorial, and systematic botany, with special reference to the United States. From the prospectus I quote the following:

"The first number of an original monthly periodical, the design of which is sufficiently indicated by the above title, will be issued on the 15th of July next. Its general management will be in the hands of Mr. James W. Ward, of this city, who has devoted much time and study to the subject, and has accumulated with reference to such a publication a considerable amount of valuable material; this, with a large correspondence with Botanists in various parts of the country, and an ample exchange with foreign botanical journals, will afford an abundant source for interesting topics for discussion, and fertile suggestions for new observations and experiments; embracing the structure, physiology,

specific characters, classification and economical uses of the plants of this continent.

"The subject of botanic nomenclature, now in such sad confusion, will receive special attention; and all new facts and discoveries in vegetable physiology and chemistry will be carefully examined and recorded."

The reader is referred to the advertisement for further particulars.

*Cahoon's Mammoth Seedling Pis-plant.*—A splendid specimen root of this vigorous variety has been received from B. P. Cahoon, of Kenosha, Wisconsin. It has been remarkably well grown, and must be a large variety to present such immense buds as were pushing from this dry root when the box was opened. Unless a transition from the black, sandy loam of fertile Wisconsin, to the heavy, brown, aluminous soil into which it has been transferred, prove prejudicial to its health, I hope to be able, during the summer, to exhibit some fine leaf-stalks, and contrast them with similar products of the celebrated Victoria variety, planted in the same soil a year ago. A history and description of this plant shall be given in a future number.

*A Synopsis; or Systematic Catalogue of the Medical Plants of the United States.*—I acknowledge my indebtedness for a copy of this work to my old friend A. Clapp, M. D., the eminent naturalist of New Albany, Indiana. It is a report presented to the American Medical Association, at its session of May, 1852, and will prove a valuable book of reference, especially to those members of the medical profession who are interested in this delightful branch of science.

*Transactions of the Windham County Agricultural Society for 1852.*—I am indebted to W. Clift for a neat pamphlet with the above title. It gives an account of the doings of the Windham folks, and also contains a beautiful address upon "The Econ-

omy of Agricultural Education," by W. Clift, an active member.

## CORRESPONDENCE.

### Western Science Vindicated.

THE following communication from my learned friend, Dr. J. Locke, Professor of Chemistry in the Ohio Medical College, is put upon record, not because of any personal considerations, but simply in justice to the cause of science, even in so slight a matter. Our eastern friends must not imagine that to themselves alone, though we accord them all honor, belong the exclusive patent-right of investigation and discovery. My readers will be so good as to pardon the presentation of this allusion of Dr. Locke's, to a slight contribution to science.

DR. WARDER:—As I am not familiar with the microscopic characters of pollen, I had enclosed some specimens of the late shower both to Professor Bailey and to Professor Gray; however, the night before I received the answer from Bailey, I learned, by Dr. Kellogg, that you had determined it to be the pollen of pine or some coniferous tree. In the note which I communicated to the Commercial, with a copy of Bailey's note, I mention your determination of the same point, or rather I say that Mr. Kellogg informed me that you had a work in which the figure of coniferous pollen agreed with what was found here. In a late Boston Journal I find that our eastern friends have given the credit of this matter to Gray, and leave the impression that the circumstances did not distinguish it from sulphur! All this was done very cunningly by communicating it to the New York Journal of Commerce, and then copying it into a Boston paper. I have made a communication to the Boston Journal, in which I venture to claim the whole affair for Cincinnati—giving you the credit of the coniferous determination, at the same time giv-



ing Bailey and Gray their true credit. But as you had determined the same thing before we got anything from them, it has all been done at Cincinnati.

P. S. The cypress flowers in February, in South Carolina, and the pines in the *last of March* and the first of April.

Very cordially yours,

JOHN LOCKE.

From the Birds.

Dingle-Dell, May 19, 1853.

DEAR DOCTOR, NATURE'S FRIEND:—What can be done to protect us singing birds, the ornament of your woods and fields, and delight of every lover of rural music? Can not something be devised for our safety, or are we still to be at the mercy of the cruel sportsman, and the game of every idle boy? Laws are of little effect while farmers feel no interest in, or affection for us; for they quietly look on and see us shot, if they do not join in the *manly* sport themselves. If, through your useful Review, you could convince the agriculturalist how much we birds would save them per year, by destroying the insects, which injure their fruit and grain, as well as increase the pleasure of their wives and children, by our beauty and sweet music, you would do more to protect us songsters, than all laws can do. Who that has but a thimble full of music in his soul, is not stirred by our cheerful notes—our morning songs of joy, and evening hymns of praise. People run mad to hear Jenny Lind sing the bird-song, or Ole Bull play on the violin, and yet the cat-bird would be ashamed of Jenny's song, and Ole Bull is but fiddle-de-dee to the robin. Let any one at this season of the year, walk out in the bright and early morn, when every leaf and blade of grass is sparkling with its dewey diamond, and the air full of that delicious fragrance that belongs to the groves and meadows, in May and June, and listen to

nature's morning choir, and feel if his heart does not bound with delight at the harmony around him.

I have often seen a white-headed old gentleman, a friend of ours, seated on the grass, in a quiet nook, under some shady beech, or noble elm, listening by the hour to our concerts—to the robin redbreast pour out his music in one continuous stream of the richest melody, as if running over with excess of joy, and the cat-bird, almost a second mocking-bird, with his lively, varied tunes, the sweet, plaintive blue-bird, the liquid, musical-box notes of the timid wood-robin, the happy, joyous oriole, singing on the wing, the cheerful, chattering wren, the lark's soft "cant-see-mee," as he rises from the meadow, the "chit-chit-chit-chit" of the field sparrow, who never tires of his song, the quick, stirring notes of the whet-saw, the clear whistle of the red-bird, the tingle tone of the swamp black-bird, and my own social call of "bob white," all present such an animated scene of happiness and joy, as no concert-going-crowds ever witnessed. If fashion would only tune natural, we songsters would be cherished, and your fruit preserved more effectually than by all the jimcrack nostrums of experimenters.

A few days ago, while sitting on an old log, on the bank of a lovely ravine, whose slopes were lined with wild flowers, listening for the answer of my mate, bang went a gun, and down come a little blue-bird, fluttering with a broken wing, shot in mere sport, while singing in this sweet place. "Detested sport, that owes its pleasures to another's pain." Do try to do something for us, that's a darling! and a thousand little throats will swell with gratitude they sing their songs of thanks.

On behalf of the choir,

Respectfully yours,

BON WHITE.

**Notes on the Numbers for April and May.**

April 25th, 1883.

DR. JOHN A. WARDER, Dear Sir:—Your April number came to hand but a few days ago. The busy occupations of spring calls for all the sunny hours in the appropriate work of the season, yet I watched for its advent with interest, and devoted the first moments of leisure to its perusal, and here are some hasty notes on its contents.

*Chemical analysis of soils*.—Is just such an article as farmers should read, and reflect upon. Mr. Christy explains clearly why researches of this kind fail to give satisfaction in many cases. State geological surveys will aid much in this particular, but that man is short sighted indeed, who fails to get all the knowledge he can of the nature of the soil he works, unless it be already all that he wishes. Who would refuse moonlight because they could not attain to noon-day sunshine? Chemistry and geology are the farmer's sciences, and a liberally educated agriculturist should be proficient in both.

The article by the authoress of "Rural hours," is well worth reading. The "vandals" have not yet all passed away. The pioneers who "cleared" our rich land, however, should not be denounced too severely. Allowance should be made for their peculiar necessities and surroundings; the noble poplar or oak might shield a sculking savage foe. They had "a call" to fell the forest, and it withered before their ax; this hardy race has nearly passed away, and busy cities occupy the sites of their rude huts. The man who now, in a sparsely wooded country, wantonly destroys a fine tree, deserves all the hard names that can be heaped upon him, besides "the full benefit of an August sun upon his shadeless dwelling."

*United States Agricultural Society*, will no doubt be very useful in disseminating information, and advancing the interests of agri-

culture and horticulture. "Much depends," says Mr. Wilder, "in the efforts and approbation of those who guide the public journals." We, "the million," want information; should like to see the constitution, terms of membership, and particularly their issue in lieu of patent office report, which is now a very valuable document.\*

*The Apple Orchard*.—Friend Byram's answer to a Virginia correspondent is interesting. Deep planting, and deficiency of lime in the soil causes the death of many apple trees; if in addition, weeds and grass are allowed to grow unchecked around the young tree, how can we expect it to live, much less flourish? Lime your orchard liberally if on freestone soil.

*Low trees*.—Good! I also like this talk; let any one who doubts try a few trees, letting them branch two or three feet from the ground, and after trial if he still prefers high trees, let us hear from him.

*Balance line, cherries, Cleveland v. Boston*.—must be a fine place for cherries that; can it be possible that Cleveland has produced so many fine cherries as to supercede all the best known kind! if so they should be more generally known. Will not your correspondent give the address of some reliable nurseryman who can supply them?

*Egeria*, a remedy found at last—and that remedy, "coffee grounds;" well, let's try it.

*Plants suitable for edging borders*.—A good article. Very. The savin strikes me as just the thing; and the yucca for carriage roads.

*Trailing arbutus*, must be a beautiful little plant to call forth such a really beautiful description as you gave us from "comparative psychology;" the first paragraph, particularly, is really beautiful. I should prize the plant that would recall it to memory.

*Pyramidal training*.—Thank you for a de-

scription and cut of this manner of training the vine. It seems simple and easy, without being very costly, and must certainly secure the vines very effectually from being injured by the wind, which is more injurious to this crop than most persons imagine.

*Turbid wine.*—A valuable piece of information, from Mr. Longworth; if a great secret falls into his hands, it belongs to us directly, for which I know him.

*Rehfuss' wine and theory.*—Fourdnier's article on this subject is worthy of a place only because it calls forth Mr. Rehfuss' rejoinder, in which he shows that his experiments are not vague and aimless, but the result of much research and thought. His theory is doubtless correct; the change of mulic and other acids into tartanic acid, as the grape ripens, shows the importance of having none but thoroughly ripe grapes in making wine; and the precipitation of tartrate of potassa, as alcohol, is developed in the process of fermentation, shows the importance of that alkali, and also the reason of good wine improving by age, while an inferior article is ruined, the same keeping.

*One hundred apple trees*, reported by the fruit committee of the Cincinnati Horticultural Society, is valuable, because it evidently has been fully discussed. If all similar societies in different parts of our country would make out such lists of this, and of other fruit, an amount of information would be obtained which would be invaluable to one about to set out fruit trees, saving them much disappointment and vexation. I prefer the *Prior's Red* to the *Rauale's Sweet*, but it is such a miserable grower, and within a few years the trees have looked so very sickly that in this particular I fully approve of the list for a locality some miles further south.

*Vegetable Physiology.*—The three articles on this subject in this number are worth a

year's subscription to the Review. Read attentively together one may understand the present state of this science, if not the true theory of circulation and nutrition of plants. Conflicting opinions in these papers warn us that enough is not yet known to build theories. The collecting and collating of facts must be the work of vegetable physiologists for some time to come.

*Strawberry theory.*—Duster is certainly correct in drawing a different conclusion from Mr. Meehan, that "the distinction of the pistillate and staminate is worthless." Nevertheless, Mr. M. may be correct in his statement; the accelerated or retarded growth may produce an imperfect condition of one or the other of the sexual organs; indeed facts exist which tend to prove it, yet as like causes will always produce like effects, Mr. M. is not justified in overlooking the known fact, that in our climate and soil certain kinds are *invariably* deficient in the male, and others in the female organs, notwithstanding, the same plant may produce a perfect flower under different circumstances. But stay; I am treading on dangerous ground. I do not wish to arouse old "Nic," who can not conceal himself, or throw "dust" in our eyes. The theory he so long advocated is now generally received without admitting the strawberry to be a truly diaceous plant, which I have never understood him to claim for it.

*City gardens.*—For a small lot, such as described, I with you prefer a brick pavement to the constant wear and tear of patience, which careless children, domestics, or animals would cause in so contracted a garden spot. But like you I would appropriate a corner for the children's garden; they will learn there more than is taught in books; they will "love not man the less, but nature more," and this fondness for nature will be invaluable to them in after

life. A truth established by experiment, be it but the germinating of a bean, is a source of the purest pleasure to them. Every child, in city or country, should be allowed to gratify that inherent love for the honored profession of our common ancestor.

*Potatoes, seed and seedlings.*—Mr. Goodrich will, without doubt, be the means of restoring that valuable tuber to its healthy condition; he seems to have devoted himself to this object. His directions for raising and selecting seedlings, it is to be hoped, will induce many to make experiments, with different varieties; yet, for a fully renovated, vigorous stock, we shall look with interest to Mr. Goodrich's own efforts.

*Cut-worms.*—Salt, it is said, will kill them if sowed at the rate of four or five bushels to the acre when the ground is broken up in the fall or winter; for many crops it will act as a manure; it is worth trial.

*Cultivation of orchards.*—Writers on this subject should always be particular to state whether they mean the culture of the orchard, as such, or the practice of raising crops, on land appropriated to trees—two very different practices. I have seen corn grown year after year in young orchards, and in the fall hogs were turned in, to eat the corn on the ground; the trees thus have the benefit of thorough culture, a partial shading of the ground, and but little draft on their supply of nutriment, if the ground is plowed as soon as possible after the hogs are withdrawn. I should think this practice much better than setting in grass; the trees must be at least as large as a man's wrist, or the hogs will injure them. Trees that have stood long in grass have their roots very much mutilated when the ground is plowed, being much nearer the surface than those in ground under constant cultivation; the shock to the tree must be very great.

*American Wines in France.*—The politeness natural to a Frenchman prevents their

report from stating that they did not relish them; yet I should say, from the report, it caused some wry faces in the tasting committee. Why is it that American vines are not productive in France? Can it be on account of their severe pruning? May not the same practice be affecting its fruitfulness at home, in closely planted vineyards? Conversing a few days ago with a very intelligent gentleman who has a vineyard of several acres, he informed me that much the best grapes he had last year were from vines that had been through neglect allowed to escape above the limits of the trellis, and ramble over the tops of some quince trees. Struck with the superiority of the fruit he intends to experiment this year, by letting an acre of his vineyard "run wild," without pruning of any kind; this is probably going into error on the other extreme, but we have much to learn as to its proper culture and management.

*French mode of planting cuttings,* is a very sure way of getting them to strike, particularly if the weather should prove dry and windy; for cuttings of any kind, to be struck in the open air, this mode will prove valuable, though not novel, but when under a shade or frame it presents no advantages.

P.

#### Farmers' Library.

MA. EDITOR:—In a former number of the *Farmer*, I made some remarks on the benefits of agricultural lectures in lyceums. This was done under the impression that such institutions were in operation in all, or nearly every town and hamlet, wherever these remarks might be so fortunate as to be read. I suppose such institutions, are, through the winter months, in existence almost everywhere. But a new question comes up with regard to them. Are they established on the principle of firmness, and conducted with the systematic order that such associations should be? I refer now to lyceums in agricultural communities, where the intellectual

wants are for agricultural information, and prosperity arises more from agricultural success, than from any other natural cause.

Now, I have a beau ideal of what such a lyceum should be. In the first place, it should be an *agricultural lyceum*, embracing in its phalanx those who design to cultivate the earth as a profession, and who have enough respect for that profession, to give their influence and hearty good-will to elevate it to the position where nature and nature's God designed it should rank. I am very well aware this picture, which should everywhere be visible, is a bold one, and implies many things. In the first place, I suppose it clearly shows, that to be a farmer does not imply "a mere clop-hopper," an animated mass of clay whose noblest attribute is physical energy, excited by the idea of adding field to field, and increasing the swelling numbers of herds and flocks.

No, the position I take elevates him above all this, and defines him as an *intellectual* being, sent into the world to pluck out the thorns and thistles that man's perverseness sowed, and plant roses and myrtles in their place. It is for him to make the desert smile in verdure, and waste places to yield bountiful harvests. He is, through all coming time, to give bread to the millions of earth, and when he draws its rich treasure from her teeming bosom, he must do it in so kind and restoring a manner as not to exhaust her resources. *Mind* must guide in these operations, and to do it successfully, mind must be enlightened by science as well as aided by experience, or too often its noblest efforts will prove abortive.

Now, how is this farmers' lyceum to aid him in this intellectual culture which is so very essential to the cultivation of the earth? We have spoken of lectures as one means, a very important one too, on many accounts. But these are incidental, *periodical*, coming, it may be, once a month, though I should hope oftener. At any rate, there must be a gap between them, and these gaps in the progress of mind, like the rent in a garment, unless fitted up and closed, will be very apt to become larger, until *the whole* is rent. I say, then, to fill up this empty chasm as it will too often prove, that in connection with, and as a part of these lyceums, *the library* should form an important feature.

Agricultural libraries among farmers are

not an unknown feature of the age; all, however, do not seem disposed to possess them. But get up such libraries in connection with the lyceum, and for aught we know, all would read. At least, we may fairly suppose that many will. Now how trifling would be the expense for the members of an agricultural lyceum to take *all* the first-class agricultural publications. And with an equal sum thereto added, what rich collections would be made each year in scientific works on matters relating to the farmer's well being. By these, young farmers would be taught the principles and progress of science, and by the former he could learn the result of these principles when reduced to practice, their failures and successes.

O! what a beautiful ornament such an institution, endowed with a well selected library, adapted to its progress, would be to any town in our good old State. Yet how many such can our State boast? Have we one? Where is the goodly land where it may be found? We would gladly go there in the expectation of seeing unusual thrift, countenances beaming with happiness and contentment, bought by the rich gift of intelligence, operating like a main-spring to regulate all movements.

How many farmers have we in Massachusetts who will pledge themselves to become even sitting and hearing members of such an association? If there is a town where ten, nay five, can be found who will meet once a week to hear and talk about farming—*resolved* that noble effects shall grow out of it, the agricultural destiny of that town can be saved. A lyceum, like the one I would have in every town and village of any note in the United States, would soon be established, the intelligence of the inhabitants would brighten under its influence—a purer stream of thought breaking out, and fed from fountains of truth, would purify all parts; the earth would smile under more varied and richer harvests. Here it would be found that competence and wealth could be drawn from the earth, not by "servile labor," but by well-directed, careful industry, such as men in every sphere must practice in order to succeed—in short, happiness as pure, intelligence as high, refinement as chaste, as earth can afford, would here be found. Taste would aid economy in rearing building, planting trees, dividing of fields—indeed, in ev-

everything to make earth beautiful, home delightful, and all things pleasant to enjoy.

And would not these attractions tend to check the spirit of discontent which is now bringing so many young men into scenes and occupations which are drudgery in comparison with the farmer's life? Farmers in the present day, if you would have your sons respect the profession which you have followed so calmly through life, if you would have them stay "on the old homestead," dear to you from a thousand associations, and

which you may wish to retain in your family,—if you would save them from vice and folly—to which new scenes frequently allure—each them that mind can find as great a sphere for operation in the farming field as in the pent-up shops and counting-rooms, and that independence is easier won in the pure air of the country than in the dingy, contaminated atmosphere of town, and encourage the farmers' lyceum as a means of elevating them to the positions they so earnestly desire.—*W. B., New England Farmer.*

### METEOROLOGICAL TABLE.

CINCINNATI, APRIL, 1853.

THERMOM.		WEATHER.			RAIN.	SNOW.	Date.	WINDS, ETC.
Date.	Min.	Max.	Sunrise.	Noon.	Sunset.			
1	51	62	clear . . .	cloudy . .	cloudy . .	....	1	Light SW.; brisk N., light W.
2	42	61	do. . . . .	clear . . .	clear . . .	....	2	Light N.; calm.
3	48	53	rain . . . .	rain . . .	cloudy . .	1.02	3	Light E.; calm.
4	45	48	do. . . . .	do. . . .	clear . . .	.71	4	Light N.; and NW.
5	39	57	clear . . . .	clear . . .	do. . . . .	....	5	Light SW. and W.; brisk W.; light W.
6	48	49	cloudy . . .	cloudy . .	rain . . . .	.42	6	Brisk W.; high W.
7	39	56	do. . . . .	clear . . .	clear . . .	....	7	Calm; light SW. and W. brisk W.; calm.
8	39	69	clear . . . .	do. . . .	cloudy . .	....	8	Light SW.; high SW.; brisk S.
9	45	61	do. . . . .	do. . . .	clear . . .	....	9	Light NW.; brisk NW. and W.
10	43	54	do. . . . .	do. . . .	do. . . . .	....	10	Light N. and NW.; light N.; calm.
11	46	67	do. . . . .	do. . . .	do. . . . .	....	11	Calm; light S.; calm.
12	61	78	variable . .	variable .	cloudy . .	....	12	Brisk S., high S.; brisk SW.; calm.
13	64	77	rain . . . .	clear . . .	cl'y, rain .	1.11	13	Light SW.; brisk SW.; squally at night
14	48	52	cloudy . . .	variable .	variable . .	....	14	Brisk W.; high W.; brisk NW.; calm eve.
15	41	60	clear . . . .	clear . . .	clear . . .	....	15	Brisk NE.
16	51	55	rain . . . .	rain . . .	rain . . . .	1.81	16	Brisk NE.
17	42	60	variable . .	clear . . .	clear . . .	....	17	Brisk NW. Calm at night.
18	47	64	fog clear . .	do. . . .	do. . . . .	....	18	Calm; light W. Calm at eve.
19	50	75	rain . . . .	do. . . .	rain . . . .	1.04	19	Brisk SE.; light S.; brisk SW.; squally
20	50	67	variable . .	do. . . .	clear . . .	....		NW.; hail, thunder, variable.
21	51	80	clear . . . .	do. . . .	do. . . . .	....	20	Light N.; calm.
22	71	85	do. . . . .	do. . . .	do. . . . .	....	21	Light SE.; light SW.; high at night.
23	55	62	variable . .	rain . . .	var. rain .	2.07	22	Brisk SW.; high SW. brisk W.; light NW.
24	49	75	cloudy . . .	clear . . .	rain . . . .	.45	23	Light E and SE. heavy thun. sq. at night.
25	44	50	do. . . . .	cloudy . .	variable . .	....	24	Calm; light S.; high NW.; calm.
26	37	63	fog, clear . .	clear . . .	clear . . .	....	25	Light N.; calm at night.
27	45	72	clear . . . .	do. . . .	do. . . . .	....	26	Calm; calm.
28	56	80	do. . . . .	do. . . .	variable . .	....	27	Calm; light SW.
29	63	73	do. . . . .	do. . . .	rain, clear .	.07	28	Light SW.
30	52	71	do. . . . .	do. . . .	clear . . .	....	29	Calm; light SW.; light N.
							30	Light N. and NE.
Rain in the month, inches,							Clear days in the month. . . . . 13	
							Variable—sun visible. . . . . 14	
							Cloudy—sun not visible. . . . . 30	
Rain in the month, inches,							7.70 000	

Mean temperature of the month, . . . . .	56.41
do. do. April, 1852, . . . . .	53.30
do. do. do. 1851, . . . . .	54.34
do. do. do. 1850, . . . . .	51.57
do. do. do. 1849, . . . . .	51.10
do. do. do. 1848, . . . . .	56.32
do. do. do. 1847, . . . . .	57.73
do. do. do. 1846, . . . . .	60.65
do. do. do. 1845, . . . . .	61.71
do. do. do. 1844, . . . . .	65.00
do. do. of all the above, . . . . .	57.11

Lowest temperature, . . . . .	36.00
Highest temperature, . . . . .	85.00
Range, . . . . .	49.00

Quite a pleasant April in regard to temperature; rain nearly double the usual average. Indications are strongly in favor of a productive season, the fruits being now considered safe from frost.

Green peas and cherries appeared in our market as early as the 4th of May, 1844; the usual time of their appearance here (to which may be added strawberries) is about the middle of May.

JOHN LEA.

Vol. 65  
California

TO THE  
ASSOCIATES



Farm House.





VOL. III.

JULY, 1858.

No. 10.

## Miscellaneous.

### THE VIRGINIA CREEPER AND ENGLISH IVY.

THESE fine plants, the most valuable of all for house walls, get but little of the attention they merit. The first is a native of all our woods. Those of your readers who have ridden in the country in the delightful days of autumn, when the first light frosts have just given the forest foliage the gentlest hint of the approach of winter, can not have failed to observe the bright crimson pillars that stand out in almost burning beauty in rich contrast with the green of the forest leaves. This is the Virginia Creeper, sometimes called the American Ivy. It generally chooses the decayed tree, whose branches have fallen off; and the naked and topless shaft becomes a support for the most gorgeous of all of autumn's forest raiment. It likes a rich soil, and something rough for its tendril shoots to find a lodgment in. The smooth surface that board-work affords does not furnish a hold for the vine. The brick walls of a house are sufficiently rough to encourage the climbing propensities of the growing plant: yet even on them it is well to occasionally nail up the leading shoots with small strips of buckskin, using large carpet tacks for the purpose. This will be a safeguard against very severe winds that some times loosen the Creeper. On wooden

houses it is necessary to fasten it up in the manner that a climbing rose or grape vine would be secured.

The English Ivy (the Irish Ivy is a species very much resembling the English) has been immortalized in old romance. You can hardly read of an antiquated castle, or of a good comfortable old English home, without having associated with it in your mind the Ivy. It is an universal appendage to the architecture of the island—giving life to the deadly coldness of its somber churches, and a garb of perpetual verdure to the cottages of the poorer classes. In England it is one of the hardiest of plants, and is its own protector. It boldly asserts its right to a foothold in the crevices wherever a stone or brick wall can be found. In this latitude it can be planted with safety; though the north side of a building is most favorable. Three young plants of my own were slightly injured by the unusually severe cold of last winter. This winter they seem quite untouched by frost—even the thrifty young shoots of last season passing the winter unharmed. This plant will grow from cuttings. In a dry soil, with a small portion of gravel, a very few years will suffice to cover the greater part of the side of a house.

The English Ivy and the Virginia Creeper should be grown side by side if possible. The first, being an evergreen, enlivens the winter as well as the summer. The other is not an evergreen; but has a brighter hue in the warm months—relatively as the French Green to Verdigris. When well-rooted they are about equally rapid growers. Those of your readers who have seen them growing in their perfection on the walls of several of the New Haven churches, or on a few of the churches of New York, can have a full appreciation of their great beauty.

A word of caution to the novice will be in place here. If you go into the woods in search of the Virginia Creeper to transplant, the Fall will be safer than Spring, if you are easily poisoned. At the former season you may find the leaves on, and will be able to distinguish the difference between this plant and the Mercury or Poison Ivy, which it much resembles. The Virginia Creeper has five leaflets in a leaf; the Poison Ivy but three.

WM. H. SCOTT.

ADRIAN, March 10, 1853.

*Farmers' Com. & Hor. Gaz.*

#### The Wax, or Tallow Plants.

I WISH to direct the attention of the practical farmer to the importance of cultivating wax or tallow plants. Several species growing wild through a vast extent of our country from Maine to Louisiana, in great abundance, and may be increased to an almost indefinite extent.

We learn little or nothing of its culture or use from American writers, besides placing it in the list of botanical plants. They are noticed by foreign naturalists, and one species which was brought from America into Britain in 1730, as a curious exotic, called the Tallow or Candle Berry Myrtle. It has been known by the early inhabitants and occasionally collected for medical purposes, but never to be used for candles to take the place of spermaceti or tallow. I would urge upon you the selection of these plants for agricultural experiment.

I do not doubt you will find it a source of profit, and will grow, like cotton, into great commercial importance, which at one time was regarded almost or quite as insignificant as vegetable wax is now.

The *Myrica* is a genus of plants containing ten or eleven species. Perhaps the most important are now growing in the United States.

The *Myrica Cerifera* of Linnaeus, called the wax myrtle or bayberry, is from three to eight feet high, branched towards the summit, leaves stiff and lanceolate, serrated at the points, from two to four inches long, from one-half to an inch wide, resembling myrtle leaves, and like them when rubbed in the hand, emit a delightful and refreshing fragrance.

The first aggregated, spherical, about the size of a pepper-corn, incrustated with a dry white wax; the flowers put out in May, and are of a whitish color; bears fruit in August and September. The branches of the old plant shed their leaves in autumn, but the young plants are raised from the seed; through the greater part of the winter they appear as an evergreen. It yields a large supply of waxy matter, of the same principles as that of beeswax. It is said a single bush produces from twenty-five to thirty pounds of berries, yielding as much as twenty-five per cent. of wax. The cruder wax is of a light green, though not always of uniform shade, probably depending upon the age of the bush. It may, however, if desirable, be bleached white. The wax is obtained by boiling the berries in water until the wax floats; this is skimmed off, put in another vessel, re-melted, and the skimming continued as long as any wax rises, and then run into cakes. The wax when fresh affords a balsamic odor. The candles burn a long time, steady and equal, without guttering like tallow. They require no snuffing; emit no smoke, and have no offensive smell like tallow; but on the contrary, when suddenly extinguished, they afford an aromatic fragrance. They contain nearly twelve atoms of olefiant gas, and one of carbonic acid, which renders this so valuable as a combustible affording light.

*Myrica Carolinensis* was introduced into Britain in the seventeenth century, from this country. It is propagated by seeds, or taking shoots at the base of the bush and trans-

planting them. They are raised in light sandy soils. They produce about seven pounds of berries to a bush; from four pounds they produce one of wax of a firmer consistence than beeswax.

The *Stillingia Sebifera*, the insect plant from China, has been acclimated in South Carolina and grows in the neighborhood of Charleston. It is a very hardy plant, and delights in the vicinity of a saline atmosphere. It yields a yellow flower and possesses great economical adaptations to our country. A stearine candle factory principally of this plant, but all of vegetable origin, is now in operation in London; for the last year, nine hundred hands are employed; one hundred tons produced weekly; total product, 400,000 pounds, worth more than a million of dollars. The Chinese made their candles of this plant, many centuries ago, though lately introduced into English manufactories. The crude wax sells in England from twenty-two to twenty-five cents a pound. It melts at 164° Fahrenheit; is white and made green by verdigris, and colored in the same way as beeswax. The bayberry melts at 169°, though when bleached at 142°; while tallow melts at 92°; possessing obvious advantage over animal tallow for southern climates, and durability. Several trees grow in China; the chief of these are *croton sebiferum* and the *Taxes sebifera*; it is about the height of a cherry tree; its fruit is inclosed in a kind of pod, or cover like a chestnut, and consists of three white round grains of the size and form of a small nut, each having its peculiar capsule, and within like a stone; this stone is encompassed with a white bulb, which has the consistence, color, smell, and other properties of animal tallow. The Chinese make candles of this to a considerable extent. A writer observes, had they the art of purifying it, it would be equal to the best tallow candles. They are made in a rude way, the wicks being made with a little rod of dry light wood, covered with the pith of a rush. There are other species that yield waxy matter from their branches and stems, and enter into the composition of soap in China and Europe.

I do not claim to have made any new discoveries in botany, or new properties in this class of plants, but if I can succeed in introducing and acclimating them into our coun-

try, of every variety of climate, and cultivating those that are indigenous, establish manufactories for home consumption, or a new article for commerce, I shall render some service in aiding in the development of a new source of prosperity.

#### Arrow Root.

LAKELAND, (FLORIDA,) Jan. 8, 1853.

DEAR SIR: In compliance with your request, I now proceed to give you my mode of planting the Arrow Root, and preparing it for plantation use. Select a piece of land of a loose texture, such as would be suitable for the sweet potato, and throw up beds with a turn plow, three feet apart, then open with sconter or bull-tongue and drop the seeds two feet distance and cover about two inches deep. The middle of March is the proper time for planting, and no care or attention is subsequently required, but to keep the plant free from weeds and grass. After the first frost, dig; and when you have selected the seed, bury them in some dry warm spot, at least a foot deep, where you can suffer them to remain until the time for planting arrives. The preparation of the root for food is tedious, owing to the outer coat being very tough; and should be commenced as soon after digging as practicable. Grate the roots in a vessel of water, pass the contents of the vessel through a sieve, and separate the fibrous and impure parts from the Starch or Flour, which settles at the bottom of the vessel—if the water is discolored, you must pour it off, and pour in clean water, always allowing it to settle, and leave the contents held in suspension at the bottom of the vessel. When the water is perfectly clear and pure, the sediment is in a proper state to be dried.

Very respectfully, etc.,

EDWARD HOUSTON.

Hon. W. B. Wynn, Calhoun co., Flo.

#### The Crystal Palace.

THE progress of the Crystal Palace, at Sydenham, continues rapidly and satisfactorily towards completion; and although, for various reasons, it will not be thrown open for public admission this summer, yet it will be visitable by those who obtain tickets under regulations hereafter to be determined. The following extracts from the last report

of the Directors, and from Mr. Laing, the Chairman's speech, are full of interest :

"After the purchase of the building, the first step taken was to secure an appropriate site. For this purpose it was found expedient to purchase a much larger extent of land than was actually required for the park, in order to secure the assent of adjoining landowners, and to effect diversions of public roads.

"The principal purchase was that of Mr. Schuster's park, consisting of 171 acres, which that gentleman most liberally allowed the Company to take at its then existing market price, as determined by a valuation. The price was referred to Mr. Daniel Smith and Mr. Norton as referees, with Sir John Musgrove as umpire, and settled by them at £86,661, 12s. 8d. The other purchases comprised 178 acres, at a total cost of £81,000; so that the Company, on the whole, became proprietors of 349 acres, at a cost of £167,661. The policy of securing sufficient land before its value had been enhanced by the construction of the palace soon became apparent, as a portion of the surplus on the outside of the park has been already disposed of at a large profit. An offer made by Mr. Wythes, of Reigate, of £100,000 for 149 acres of this land, has been accepted, which, with some other small portions sold, will show a profit of £51,000, which has been realized in the course of a few months by the re-sale of land. The Company still retain 200 acres, within a ring fence, of land of the most valuable character.

"The necessary space being secured, the determination of the position of the palace thereon became a matter of anxious consideration, and the summit of the hill above Sydenham was finally selected. This site, owing to the nature of the ground, involved an increase of expense, but the advantages of occupying one of the most commanding situations in the world, overlooking London, the valley of the Thames, and the plain of Kent, were so apparent, that the Directors did not hesitate to adopt it."

Mr. Laing said—"I do not wish to enter into details of what our plans are, and I will merely say, as a general result, that the outdoor portion of the undertaking—the park, with its terraces and gardens, and cascades and water-works, will be quite as won-

derful, as magnificent, and as striking, in their way, as the Crystal Palace itself; and, therefore, that we should be able to promise you that we are in a position to carry the whole out on such a scale as is, I think, a circumstance very satisfactory. I think the result of the Exhibition of 1851 tends to show us that the principle of the Fair, the collection of a great concourse of people in a place where a great number of things may be seen to great advantage, is not entirely superseded. I think every one of us must feel its advantages. To take the simplest illustration,—in the purchase of many articles of daily use, what a convenience and advantage it would be to have a permanent exhibition, like that of 1851, at our doors, where we could go and select the articles we wanted at once. I dare say it may have happened to some of you to have to accompany a wife, or daughter, or some female relative, to choose a piano, and in that case you must know what a troublesome undertaking it is. You have to go from one warehouse to another, and to try one piano after another, and when at last you get to Collard's, you forget what you have seen and heard at Broadwood's; but suppose this exhibition exists, we shall then have the choicest productions of all the best firms placed side by side, and, I would ask, is there anybody who would make a circuit of all the London warehouses to choose a piano, when he might run down with his wife and daughter to the Crystal Palace, and try them all, and make up their minds and decide satisfactorily on the spot? That is only, of course, one illustration. I do not mean to say the Crystal Palace will become a place of retail trade, where tapes and ribbons will be sold across the counter; but I do think that, wherever expensive purchases of articles of an ornamental character are to be made, it is extremely likely that the Crystal Palace will be resorted to, to a very great extent. Mr. Belshaw, who is well known as having had the charge of the whole department of British manufactures in 1851, has been in communication with a wide circle of manufacturers and others throughout the country. He tells us that even at the present moment the applications for space are such, that if you take the lowest figure, the present applications would realize a rental of some £40,000 a year. Mind, that is

taking as the average of the whole, the lowest figure that has been offered by any one. If we take the highest that has been suggested, our £40,000 might swell to £100,000, or £120,000. Now, I never like to be too sanguine in these things; but I do say that it seems to me that there is a fair prospect, if we manage the thing properly—if we open the building at the right time of the year, and with proper *eclat*—of realizing a permanent income of from £50,000 to £100,000 a year from that source alone. You will see that our undertaking now is not a solitary one. We are to have Crystal Palaces all over the world. There is one at Dublin, one at New York, and another at Paris; and as regards their bearing on our undertaking, I may say that I believe we shall all mutually aid and assist one another. We do not feel the slightest jealousy toward any of these undertakings; we do not believe they do toward us. On the contrary, there is every disposition toward mutual aid and co-operation. And more especially as regards that great undertaking at Paris, which is more nearly parallel with ours, as that is also to be a permanent construction, I may express a feeling which I am sure will be heartily responded to, that I would very much rather see France and England engaged in a friendly rivalry as to which shall produce the best Crystal Palace, than I would to hear of their building screw line-of-battle ships for the destruction of each other."

#### Water.

The uses of water in irrigation are not generally understood by our farmers. Pure water, or that not surcharged with soluble matters, is only useful to the soil as a solvent of such materials as the soil may contain. Rain water supplies ammonia from the atmosphere, and snow water is similarly charged. Water used for irrigating meadows is usually mixed with the sewerage of towns, washings of fertile portions of the country, etc., and when caused to overflow soils through which it may freely pass, it will deposit in the soil all such matters as may be retained by the presence of alumina and carbon.

The soil, acting as a mere filter, will detain all matters held in mechanical suspen-

sion in the water; but many of these that are in absolute solution, and which would pass freely through the closest filter, will be abstracted from the solution by the alumina and carbon in the soil. Lands not properly under-drained, therefore, and having closed sub-soils, can not be materially benefited by being overflowed—as the water can not enter the soil but merely runs over its surface, and comes in contact with so few particles of earth as not to part with its fertilizing properties. An excess of water on such under-drained soils, renders them cold and unproductive; but an under-drained meadow will receive and pass away, by means of its under-drains, immense quantities of water, retaining all that is valuable for the use of growing crops. The Craigintunny meadows, near Edinburgh, and many others in our own country, which receive the meadow deposits procured by irrigation, have been more than doubled in value by such practice.

The following article from the *Mark Lane Express*, notes exceptions to this rule.—Ed.

Though water is an element of vast deterioration to the soil, either stagnant in it or poured upon it, in large quantities; and in the one case, will starve the best kinds of plants, and destroy the most valuable for cultivation by the coldness produced through evaporation; and, in the other, will wash out and carry away many of those materials fit for nourishing their growth, and so defeat the efforts of the cultivator; yet, water is the medium of conveying manure to the soil as well as from it.

It is not to the rains only that we now refer. The rivers, great and small, which run throughout the length of England's valleys, all carry away vast loads of wealth, both in suspension and solution, which would make the greatest possible source of fertility if applied to the land. Nor is it necessary to do more than let it pass over a soil, for that soil to be made to arrest and appropriate its fertilizing qualities.

There is scarcely a river in the kingdom which is not valuable for this purpose. It contains at any rate the washings of several soils, the interchange of which with another, the most barren, will be of the greatest advantage; for, as all soils contain nearly the same elements, only in different proportions, the admixture is almost certain to comprise

the chemical constituents of the soil as a whole.

But it is not particles of soil alone. There are but few streams which are not fed by the dissolved particles of more or less decomposed vegetable and washed faecal matter, and therefore must be doubly valuable in supplying absolute manure in those forms in which it is the most easily available for the cultivated crops.

If we except, therefore, those channels which wash mineral mines, and which serve as a drain for chemical works, we shall have in all streams—low enough from their source to have any valuable matters in solution—a ready mode of applying the most valuable manure to our land.

The expense of constructing these carriers is generally the great obstacle to its adoption. The land is seldom sufficiently level to admit of the application of the principle without great original outlay and expense; but, when this is done, it repays amply for the benefit it confers. The Clipston meadows are a striking instance of the vast resources of a small stream, and the almost unlimited riches which flow from it; still the recent case of Mr. Beckford, of Crediton, shows its applicability on a scale vastly more economical than any we have hitherto had before us.

He assures us that his method was carried into full effect by Mr. Ellis of Newton, at a cost of 7s. 6d. per acre; while his own expenses in labor, etc., amounted to some 3s. per acre more—giving an entire cost of about 10s. 6d. per acre; the circumstances, however, might be considered as peculiarly favorable.

The first process in ordinary irrigation is to make the land entirely level, otherwise the valleys get flooded, and the hills derive no benefit; we mean, not there is no fall, but the incline, whatever it may be, is on a given uniform slope.

The Beckford system, as we will call it, interferes not with the levels of the surface. Tapping the stream at its highest levels, it constructs a carrier at the head of the land to be irrigated, supplied with proper sluices. Assuming the surface to be unequal, the water would have the tendency to run down the hollows in streams. This is prevented by the cutting of another parallel carrier, which is cut so as to be as nearly level as

possible. This intercepts or catches the water, carrying it again across the land to be irrigated; and this is continued so long as inequalities are found in the field.

As this, however, would leave the top always the richest in sedimental, if not in soluble matter, a contrivance of a drain feeder is constructed, capable of being stopped at any one of the parallel carriers, so that the water can be turned on to the gutters or such carriers at pleasure.

The whole of these are cut by a plow adapted for the purpose, and seem to be a very successful mode of making the water of small streams available for exciting vegetation and manuring the land.

The details of the plan are given in the *Journal of the Royal Agricultural Society*, and into them we shall not enter, only remarking, that a fall of 1 in 396 is considered the best, and one foot wide and six inches deep is the proper depth for the carriage gutter.

It must, however, be borne in mind, that before any irrigation can be useful, the land should be thoroughly dry, or drained from land springs; and this must be always assumed in all works for irrigation. In the dryer and warmer climates of the North of England, the system will give a command of grass from watering alone, which renders its adoption of the very first importance.

Mr. Pusey well remarks, that if this can be done even at a rate as high as £1 per acre it will make the land £2 per acre more valuable; and this pays £100 per cent.

—*Working Farmer.*

THE East India Company have placed a ton in weight of seeds of *Deodar Cedar* at the command of the Government, and it has been calculated that if they all vegetate they will produce sixteen millions of seedlings. These seeds have been entrusted by the Government to Mr. Glendinning, of Chiswick; Messrs. Lawson, of Edinburgh; Mr. Skirving, of Liverpool; and Mr. Waterer, of Knap Hill. This will be a most valuable addition to our timber resources, for not only is the *Deodar* to be admired for its beauty of form, but for the durability of its wood.

THE amount of eggs imported into this country during the month ending on the 5th of March was 6,090,725.

**Tea-Seeds.**

WHEN Mr. Fortune was last in China, it was for the very purpose of gathering Tea-seeds for the East India Company. He collected thousands of them. Sowed them with his own hand before he left China, in boxes closed with glass, on the Wardian principle, got them round to Calcutta on the deck of a vessel, and hence to Sutledge, in the north-west of India, without losing a single plant, then after putting the people there in the right way to rear them, he returned to England, and before he left here, for the third time, we heard that the Tea-plantations, from these very plants, were so promising, as to induce the Company to engage him to go out again to gather, sow or plant, and get round as many seeds and plants as he and all his friends in China could procure, until so many thousand acres of the real China Tea-plant are established on British principles of trade in the country of the "Seven Rivers."

Now, although we can never expect to do much good by growing Tea-plants in this country, the eager desire to possess a plant of such celebrity is very excusable. Nursery men have lots of them on sale, but that is as nothing compared to the interest of raising the plant from the seeds planted by one's own hand at home, and that from a sample so well authenticated as that sent over by Dr. Bowring, and obligingly presented to the Horticultural Society, by H. Winch, Esq., for distribution among the Fellows.—I took a few of these seeds, and I shall follow up the liberal spirit evinced in the whole transaction, by offering *one* seed to any one who sends me a stamped and addressed adhesive envelop, as far as they will go, on the principle of first come, first served; and also subjoin, here, an epitome of the right way to manage them, as I learned from Mr. Fortune's own experience. When Mr. Fortune started from China, with his boxes sown with the Tea-seed, the vessel might be said to get into a hotter and hotter climate, until she turned into the Bay of Bengal, and entered the Hoogley. With his close boxes, and the effect of the sun in these parts, the seeds must have had something like a cucumber heat culture, after the first week; and as that seemed to agree with them so well, as is proved by the result, we may rest satisfied that a real cucumber-frame in England,

free from the bustle of sailors, seamen, or Hindoo coolies, will suit them much better, and be less liable to knock-them-down accidents. Then, as to soil. Mr. Fortune found that good black garden-mold suited them best; so that the top-spit of an old onion bed, or any part of a clear kitchen garden, is good enough to sow Tea-seeds in, all the world over. As to watering—things that are put into these close boxes hardly ever require any; so that we must here fall back on our own pitchers, and trust to what we would do with the seeds of a very choice *Camelia* after sowing. The Tea-seeds are nearly as large as the largest garden peas, and as brown as a berry, and, therefore a good watering can not hurt them much at first, nor wash them out of the pot. So a good watering they certainly may have, and the front, or south end of a hotbed is the best place for them, where, what with the first watering, and the dampness of the place, very little more water will be needed, except a slight sprinkling on the top, if it should appear dry. The seeds are to be placed just half an inch deep, and three weeks, or at most, a month, of the hot-bed culture will bring up the actual Tea-plant before your eyes. If the bottom-heat is not very hot indeed, I would plunge the pot down to the rim at first, and the moment I saw the first move of life, I would take up the pot, and then place a bit of board under it, as very likely the tender roots would not relish being too hot at first. When the plants are three inches high, I would give them water every time the soil got dry, and keep them in the hot-bed till the end of May, and after that in a warm room, or close cold-frame, for a month or so, after that they are safe enough where the *Myrtle* would do. The seed may also be reared in a living room, from first to last, the only difference is that the plants will be longer in coming round.—*D. BEATON, Surbiton, Surrey.*

**Wool from Wood.**

Nor far from Breslau, in Silesia, in a demeane called Humboldt's Meadow, there are two establishments, in one of which the leaves of the pine tree are converted into a species of wool or cotton, and in the other the waters left in the manufacture of this substance serve to supply medicated baths

for the use of sick persons. These establishments were both set on foot under the superintendence of a forest inspector, M. de Pannewitz, the inventor of a chemical process for extracting from long and slender pine leaves a very fine fibrous substance, which he calls "wood-wool," on account of its possessing the same felting and spinning properties as ordinary wool. The circular leaves of pines, firs, and other coniferous trees, are composed of clusters of extremely delicate, adhesive fibres, surrounding and holding together a resinous substance. This resinous substance may be dissolved by boiling, and by the employment of a certain reagent; it then becomes easy to separate the fibers from each other, to clean them, and remove away extraneous matter. By this treatment the woolly material acquires a greater or less degree of fineness. The pine may even be stripped when quite young; for if the verticles or whorls at the ends of the branches are left, the tree will continue to grow. The stripping off of the leaves takes place every two years.

The use to which this wood-wool was first applied was to substitute it for cotton or woolen wadding in quilted blankets. In the year 1842, the hospital at Vienna purchased five hundred of these blankets, and after making a trial of them for several years, sent an order for a further supply. It has been observed that when the pine tree wool is employed, the beds are quite free from any parasitical insects, and it diffuses a very agreeable and salutary fragrance. Furniture in which this material is employed is free from moths. Its cost is three times less than horse-hair, and the most skillful upholsterer could not distinguish an article stuffed with this substance from one stuffed with horse-hair. This wool may be spun and woven, the finest quality yielding a thread very similar to flax, and quite as strong. When combed, spun and woven (?) like cloth, it may be employed for carpets, saddle-cloths, etc., and combined with a web of linen or calico, it may be made up into coverlids.

The liquid residuum resulting from the boiling of the leaves, has a most salutary influence when used in a bath. The reputation of the baths has increased since their establishment nine years ago. The liquid residuum may, however, be concentrated and sent in close jars for use in private houses.

The membranous substance obtained by filtration, when the fiber is washed, is put up in the shape of bricks and dried, when it may be used as fuel, and produces a very considerable quantity of gas for lighting purposes. About a thousand cwt. of wool, leaves a quantity of fuel equal in value to more than 180 cubic feet of pine wood.—*London Mechanics' Magazine*.

#### New Weeping Willow.

THE *Salix caprea pendula*, or Kilmarnock Weeping Willow, which is now being advertised in your columns, was procured by me about six years ago from Mr. James Smith, an old and enthusiastic botanist, who resided at Monkwood Grove, near Ayr. He was an ardent collector and cultivator of all varieties of British plants. He did not inform me where he procured this variety of *Salix caprea*, but as the species is common in hedges and ditches all over Scotland, it is likely he picked it up on some of his rambling botanical expeditions. It does not seem to take well grafted on other Willows: I have therefore cultivated it principally from layers, which I trained up to poles. The plant is a most inveterate weeper, as pendulous as the Weeping Ash, though not so rigid in its habit; its twigs are stouter than those of the *Salix babylonica*, and has large, broad, glossy leaves of a deep green color; it flowers very freely on the young twigs in spring, and is quite hardy, as a matter of course, seeing the *Salix caprea* is as hardy a plant as we have in this country. The name Kilmarnock Weeping Willow has been given to the plant to distinguish it from other Weeping Willows, such as the American Weeping Willow, sent out by Mr. Rivers some years ago. All who have seen the original specimen plant in the nursery here are very much delighted with it, and I trust it will be approved of by the public generally.—*Thomas Lang, Gar. Chronicle*.

**WILLOWS FOR STOCKS.**—Among the imported varieties of this family of ornamental trees, most of which are worked standard high, there may be found some species or varieties which are not familiar to us—let nurserymen observe this; we need a strong growing sort to bud and graft on.—*Ed.*



## Homology.

### STRAWBERRIES AND RASPBERRIES.

TO THE CINCINNATI HORTICULTURAL SOCIETY:

Our strawberry theory, that staminate, pistillate, and hermaphrodite plants never change their character, I find is about to be exploded in the East, by the experiments of an European gardener, who has discovered that their sexual character depends on the range of the thermometer, and he can at will, change pistillates into staminate. A great age this. Mr. Downing discovered the same thing. The Hovey's pistillate seedling, obtained from Mr. Hovey, with him produced staminate runners, and to prove it, he sent some of the plants, when in blossom, to the Boston Horticultural Society. Unfortunately Mr. Hovey and the Society decided that it was not his seedling, but a different plant. I was surprised that this error was never corrected in his Horticulturist. I can readily believe this, for with all my care, I yearly find a mixture in my beds.

The European gardener is excusable for his unwillingness fully to subscribe to our backwoods doctrine of the sexual character of the plants, and their never changing. We obtained our information (not intentionally given), from the son of an illiterate woman who had for years cultivated the fruit for sale, and made a fortune by the cultivation. The secret, when known, reduced the price of strawberries in our market to one-fifth the former price, and the old woman ceased to cultivate them. Her theory was suggested to Linnæus by one of his disciples; but his master assured him that the plants he supposed to be entirely defective in pistils had lost their fruit from severe frost, and the disciple was compelled to remain silent. Since his day, as well as before,

Europeans cultivate hermaphrodites only, and among them their great plant, Keen's seedling, and do not have one-fourth of a crop of perfect fruit. Their great botanists who, since the days of Linnæus, have written on the character of the plant, have adhered to his opinion, and their gardeners have done the same. But unpleasant as the duty is, they will in time be compelled not only to admit the difference in the sexual character of the plants, but that years of cultivation will never change their characteristics. You may as reasonably ask the same change from the human family. Mr. Keen raised a seedling that bore no fruit, discovered its having no male organs, that it bore fruit when hermaphrodite blossoms were placed in the hot bed, and made the fact known to the Horticultural Society; but no attention was given to the subject.

Mr. Prince is down rough-shod on Mr. Meehan, for his remark that, "*the distinction between pistillates and staminate is worthless. Cultivation producing either the one or the other.*" Can you severely censure the great botanists and gardeners of Europe, for refusing to even look at the blossom (tho' a child of five years of age, in these benighted regions, can point out the difference in the blossom at the distance of 20 feet), when told that the discovery was made by an illiterate market woman in the back-woods. Again, he is also supported by the editor of the Florist, who, in his April number says, 'Many good cultivators pay no attention to their sexual character, notwithstanding all that has been written on the subject.' These are strange doctrines to be started in the city of Brotherly Love, where two of our

most reliable horticulturists reside, Dr. Brenckle and Mr. Buist. I request them to give their experience and opinions to the Horticultural Society. When I was, a year or two since, in the gardens of Mr. Prince and Mr. Hantsman, they had our hermaphrodite seedling and some of our pistillate seedlings. Mr. Prince recently enumerates all the varieties of the strawberry that he deems valuable, and among them the greater portion are the hermaphrodite seedlings, of his raising, and omits all our seedlings. I shall be gratified if he has so many hermaphrodites superior to ours as to justify his omitting to name it. I do not ask Mr. Prince to produce a superior; but if he will send his best hermaphrodite seedling to the editor of the Western Horticultural Review to cultivate, and they are by our strawberry committee reported as producing blossoms as perfect in both organs, crop as large, fruit as large, and equal to our seedling, they shall send him a \$50 gold medal, and I will pay the bill. I should risk nothing if I offered the same premium for a pistillate seedling, equal to McAvoy's superior.

I am also raising several thousand raspberry plants from seed. I was induced to try this experiment from finding among my Fastolfs, that I imported from England, a very few plants that bore fruit of very large size, some of which I sent to your room last spring. Going East a few days after I sent them, I visited a market garden, where there were one thousand or more plants of the same variety, the fruit of which was sent to New York for sale. And I discovered among them some 20 plants having fruit of extra size. This led me to believe that most of the plants imported from England were seedlings; and I paid an extra price for selected fruit from these plants. I planted the seed in boxes in the grape-house,

and shall transplant them into the open ground in a few days, and will from them have a full crop of fruit next season, and shall from them expect some fruit of extra size and to find some of hardier character than the parent plants. The Fastolf is often injured if not covered in the winter. The raspberry will be found a valuable fruit to raise for sale. I am also raising plants from seed of two other varieties that I found in private gardens, East, not in general cultivation; one a seedling, the other a native of Virginia and said to be ever-bearing. Of the two latter I also brought plants, and if these, or any of the seedlings should prove valuable, I will send plants to you for distribution.

Respectfully,

N. LONGWORTH.

CINCINNATI, May 28, 1853.

#### Root-Grafting vs. Budding.

In the last number of the *Prairie Farmer* the subject of root-grafting is again introduced to the reader. It will be recollected that this is a topic of great interest to the propagators of fruit trees, especially since the paper by the *Phoenix* appeared in the *Horticulturist* some years since. At the recent meeting of fruit growers, held at Dixon, Ills., considerable discussion arose upon the subject, among the members, some asserting that the product of such union of a terminal branch or scion directly with the root, without the intervention of a natural lobe or stem, was injurious, hence drawing the inference, and making the assertion, that such a union would be an imperfectly developed tree. It was also set forth, and probably with truth, that some varieties propagated in this way, were longer in coming to maturity. It had been my intention to examine this subject more in detail, and present it, with a review of the

very interesting proceedings of the meeting referred to; but I find the excellent editor of the *Prairie Farmer* has some condensed correspondence and remarks of his own, which render the question a plain one to my mind. The thrifty, growing variety will require more time to make a fruitful tree upon a thrifty stock, than upon a starveling. We have some root-grafted orchards in this neighborhood that are as hardy and productive as any.

We have eight communications on this question, and several private letters full of the matter; most of the writers have given us the privilege of making extracts, or publishing only as much as we deem best—and in fact, all is good and pertinent, but there is quite "too much of a good thing" for our limited space, and the amount already given to this theme in previous numbers. We shall not, therefore, give the entire remarks of any of our friends, and only extracts or abstracts, from those of remote or dissimilar localities. And our friends will distinctly understand, that we take this course because we have really not space for all, and where all are worthy we will not select one in preference to others; though we intend to refer to all now or hereafter, as occasion requires.

EDSON HARKNESS says: "I have about 800 to 1,000 grafted and budded trees which have come to bearing. Not much difference as to the number of those budded and those which are grafted. Now, instead of finding a great difference in their hardiness, early bearing, etc., I would not give five dollars to have them all changed to budded trees; or rather I do not think they would have been any better lot of trees had they all at the proper time, been budded on seedling stocks, instead of having been root-grafted. I do not dispute the facts stated by the advocates of exclusive budding, but believe that the inferences they draw from those facts are altogether wrong. There are certain varieties of the apple, which, planted on a rich soil, are very slow in coming to a bearing state. Take the yellow Bellefleur, for instance—it will take ten to fourteen years to come into a bearing condition, and in that time it would spread out in-

to an enormous tree, whether it be root-grafted or placed upon a seedling stock, of the same or greater vigor than itself. But place this same Bellefleur upon a rigid slow-growing seedling stock, and it will produce an exceedingly large crop three to six years sooner. And so it is with all the vigorous, fast-growing varieties. They are slow in coming to a bearing condition, unless dwarfed on a crabbed seedling, which checks their vigor, and causes them to throw out fruit buds. These dwarfed trees, however, are not so valuable as those which grow without any check, and become large before bearing. I have 16 Michael Henry Pippins, which are on rather rigid stocks—which have up to this time produced an average of 14 bushels of apples in three bearing seasons. I have also two others on very strong stocks, which have not produced more than from six to seven bushels each. But it is probable that the two large trees will in the course of 20 years, produce twice as much as any two of the others." etc., etc.

An intelligent and observing nurseryman near Des Moines, Iowa, says he believes both parties are right, according to their experience. With us he finds the causes of the evil in the *faults* of the methods, not the methods themselves.

The entire seedling, whether "grafted" at the neck, or "budded" high up, will give a tree, with abundance of fibrous roots, and, like a root-pruned tree, may be expected to bear more and earlier, in proportion to these roots and the individual nature of the stock—other things being equal—while the tree, made from a scion on a section of root, will have little vitality beyond its own, and will send out only large straggling roots from the scion with few fibers and little inclination to bear fruit; though the wood growth may be great, and dangerous.

Our friend also makes some good suggestions with respect to our next meeting of fruit growers, but desires us to withhold his name from the public. We like modesty, but think the name of a man like him always adds weight to his testimony.

H. STRICKLAND, of Roscoe, Ill., in a long and interesting communication, dissents from the budders, as a whole, but admits that in some cases, budding may be preferable to

root-grafting; though he does not think root-grafts have had a fair trial. The scions have been cut from rapid-growing nursery trees, and the stocks have been the thriftiest of the seedlings on hand, while the *dwarfs* have been used for budding and a consequent difference in growth must cause a difference in early bearing. He, too, admits and condemns the western practice of working on pieces of roots—especially lateral roots. And here, we think, is the heart of the matter—the difference is in the stocks, and possibly the sources of scions, rather than in the *method of working*, where all else is equal; but a budded tree is pretty sure of a whole stock to itself, whatever the root-graft may have.

#### Pyramid Pruning.

I NEVER see anything like proper pyramid pruning in this country. Having given attention to the mode pursued by our brother gardeners in France, permit me to give critically the mode so followed; that those who like to have trees of that character may, by time and attention, easily supply themselves with them in this country. The process consists in shortening the first year's shoot of the Apple or Pear tree, called the graft shoot, to one foot at a full bud. The first year, on pushing out in spring, rub off all laterals except four or five at the bottom of the stem, to garnish it with a first tier of branches for future years. Train the leader to a stick quite perpendicular. The next winter proceed as before, by shortening the leader 12 inches at a full bud. Remove all intermediate buds as before down the leader, and leave those at the bottom to form a second tier of laterals; and shorten the lower tier to an outside bud. After the second year shoot, the summer pruning consists in rubbing off the laterals, forming now the lower tier, above and below the branch, so as to keep them as horizontal as possible. Strengthen those which grow horizontal, by pinching off the ends, if necessary. Each tier should be as near as may be, 12 or 13 inches, one above the other; and, if possible, the branches of each succeeding tier should be so grown as to be above the intervals of the tier below. Thus, as we see in France, this training makes a beautiful symmetric tree; which, without blousing the borders,

may, when planted at a distance of 20 or more feet, adorn the flower beds of a geometric garden, presenting to the eye of taste the offerings of Flora and Pomona at one and the same time.—*Wm. Mason, in Eng. Gard. Chronicle.*

EVERY year, and every research tends to demonstrate the amount of ignorance which yet prevails relative to the cause of the *Potato Murrain*. We have, until now, entertained the opinion that the unnatural treatment the plant and its tubers annually have passed through for centuries might have laid the foundation for this disease. This opinion, however, seems refuted by the fact, that other tuberous-rooted species of the same genus, recently imported direct from their native places on the South American continent, are attacked in Europe by the same disease. The common Potato, most of our readers know, is the *Solanum tuberosum*; but now, from experiments tried in Germany on the *Solanum utile*; in the Horticultural Society's Garden on *Solanum demissum*, brought thither from Mexico; and by M. Decandolle, in France, on *Solanum verrucosum*, also from Mexico, also that their tubers, it is demonstrated, speedily become affected with the murrain.

THERE WAS a grand exhibition of flowers and plants held at Paris, on the 15th of March, for prizes offered by the *Seine Horticultural Society*. We shall only notice one or two features as grounds of comparison for our English readers. The best *Camelias* were Archduchess Augusta, Duchess of Northumberland, Madonni, Alba Carozetti, Marquis of Exeter, and Valtavaredo. Not only will it be seen that our English varieties were pre-eminent, but we were glad to observe English growers among the exhibitors, for Messrs. Standish and Noble sent an *Azalea Bealii*, which one of the French critics characterized as "*magnifique*." The *Roses* exhibited were Hybrids, Bourbons, and Tea-scented. Among them were *La Reine*, *Vicomtesse Decazes*, *Souvenir de Malmaison*, *Duchesse de Montpensier*, *Baronne Hallez de Charapede*, *Souvenir d'un Ami*, and *Louise Thenard*; but the prize for the best rose was awarded to M. Fontaine's *Triomphe du Comte de Montigo*.

**Des Nones and Bueire Charbon.**

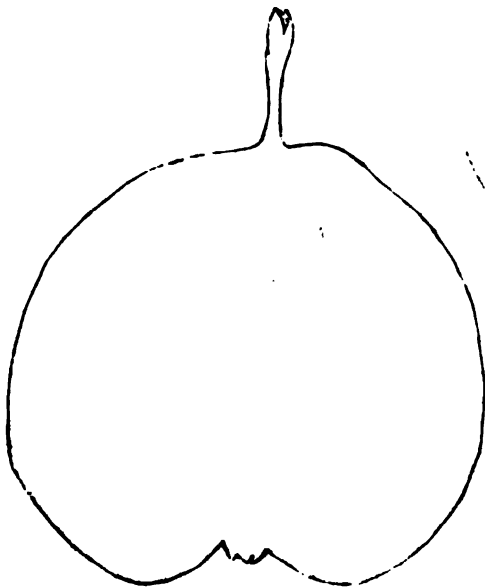
DR. JOHN A. WARDER.—Dear Sir: We observe by the May number of the Horticultural Review, that you introduced our notice of the *Des Nones* pear, which appeared originally in the Horticulturist.

We are fully persuaded that this pear is to become a general favorite, and to find a place in the very smallest collection. We fear, however, that it will be some years before it can be very extensively known; for, after much inquiry, we are led to believe that the stock of it, not only in this country but in Europe, is very limited. A recent letter from Mr. Leroy, of Angers, from whom we obtained it, informs us that he has no trees of this kind at present in his collection, "except one in his School of Fruits;" and also that it has never fruited in his nursery,

and that he owes his knowledge of its merit to our notice of it. We infer from this that it can not be much known in France; and as we had the pleasure of introducing it to the American public, through the New York and Ohio State Fairs, we suppose also, that it can not be much, if at all, known here. Our trees are now well covered with blossoms, showing it to be a prolific bearer, and promising again, in due time, a farther test of its qualities.

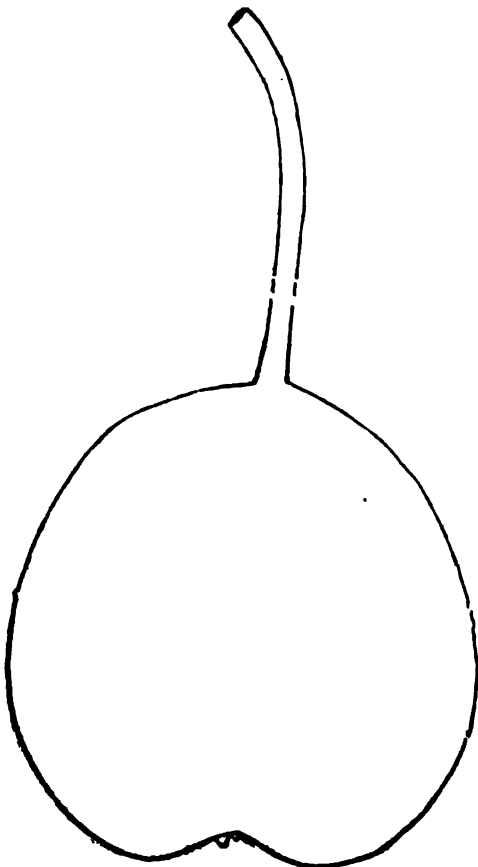
From among the notes taken of a large number of pears which ripened upon our grounds during the last season, we select those upon another variety, which came to us also, unheralded and unknown, very much after the manner of the *Des Nones*. The only catalogue in which we have observed it is that of Mr. Leroy, where it is entered under the head of "new species obtained at Angers," but without any description whatever, though all others of the list of about twenty, except one or two, are particularly described. This pear is called the *Bueire Charbon*, and was received by us in the same importation which brought us the *Des Nones*. We send an outline of it, together with our description, which are at your service, if deemed worthy of publication.

Fruit medium in size; form roundish oblate; skin yellowish green; stalk half an inch long, set on without depression; calyx closed, and placed in a deep and rather broad basin; flesh exceedingly melting, juicy and perfumed—more like the *Belle Lucrative* in its highest excellence, in these particulars, than any pear we know. It ripens about the 10th of October.



BUEIRE CHARBON.

DES NONES.



When our notice of the Des Nones was written, it had not matured on our grounds.

Though quite unlike in flavor, it would be very difficult to determine which of the two is superior in quality. Without meditating a pun, we should pronounce them, with our brief experience of one season only, "*par nobile fratrum*." In productiveness, however, in fairness and beauty of the fruit, and in the superior growth of the tree, we must, at present, give the preference to the Des Nones.

Eaten September 20th in best condition; possesses all the peculiar musky flavor of the Seekel; is sweet, aromatic, juicy, buttery, and high-flavored. Ripens from the 10th to last of September. Description in your journal is right; I think we have no superior pear in the United States. We are very respectfully, etc.,

THORP, SMITH, HANCHETT & Co.

The information respecting the scarcity of this pear is much to be regretted, as every one will desire to be possessed of this delicious variety, but I wish it to be distinctly understood that my order for twenty trees is to take precedence of all others, having made the discovery of the excellence of the variety.

#### Orange Gardens of St. Michael's.

THE orange gardens of St. Michael, the largest of the Azores islands, Lat. 39° north, Lon. 20° west, about. Without its orange gardens, St. Michael's would be but one great field of corn. To prevent the violent winds from breaking the orange trees when loaded with their fruit, it is found to be indispensable to have thick tufted trees of a rapid growth all around and inside also, of the quintas, as the Portuguese call these orange gardens. They use for that purpose the *Myrica Faya*, the camphor, the *Pittosporum Undulatum*, and *Pittosporum Tobira*. This, Backhouse says, has a green cylindrical fruit, becoming of an amber color when ripe, and of a pleasant subacid taste. Each of these trees offer to the eye its own ap-

propriate color and being (as they are) distributed over the country without order, they give to the landscape an inexpressible charm. To possess a quinta, is a supreme object of ambition to every inhabitant of St. Michael's. He rises early in the morning, goes to bed late, feeds on corn bread, drinks nothing but water during his long life; all he aims at, is to have his quinta some day or other. Most of the quintas have pavilions, and shady, delicious walks. These pavilions vary in form and dimensions, according to the taste of the owners, each of whom is his own architect, and we may well say that they display a truly great diversity of taste. But they all agree in one thing, and that is, a tower with a flag-staff.

The Portuguese first introduced the

orange here, and it is cultivated in every island, and is an object of commercial importance to Portugal. The Fayal orange trees were attacked by an insect, a coccus, (bark louse,) to such a destructive degree that the culture of the tree was rendered impossible. No method was found to save them, and all the trees were destroyed.

The island of Terceira exported annually from twenty to thirty thousand cargoes of oranges. St. Michael's is now the grand market, but unhappily the coccus has begun there, and some plantations are entirely ruined already. Many people suppose that the St. Michael's orange grows there spontaneously, yielding its fruit without any care; that is an error. Before establishing an orange garden, a high wall must be built, and then rows of the *Pittosporum*, to break the violence of the winds. When these are grown, the ground is well dug up. The orange trees, planted in rows at the distance of 25 to 30 feet every way from each. They then sow the ground with lupines, which, when grown, they bury in the soil, for the Portuguese regard it as the best nourishment they can give to the roots of the orange tree. For some years they grow beans, melons, and some other plants in the space among the trees. The orange tree does not come to full bearing until seven years old. Poor owners of orange gardens cultivate the earth in them always, but able owners leave culture in them after seven years. They trim the trees to get free circulation of air when the fruit is ripe. They flower in March and April, and the oranges are ripe in November. The Portuguese never eat them until about the end of January, at which time the fruit is in all its perfection. These gardens vary in extent from forty to eighty acres—but it is seldom that they contain oranges only—they have lemons, limes, citron guava, and other fruit trees. They cultivate only two kinds of oranges, the Portuguese and the Mandarin. The first has some varieties; it is singularly ameliorated in the island of St. Michael's. The Mandarin orange has only been here a few years. Some of the trees are nearly fifteen feet high. This excellent little orange has lately been exported to England, and obtains a much higher price than the common St. Michael's orange. The largest orange tree I have measured here was over thirty feet high, the

trunk at its base about eight feet in circumference. The quantity of fruit from such a tree is incredible—they are constantly shoring up the loaded branches to prevent their breaking down. One tree, belonging to Senor Jacintho Victor Vierva, gives annually twenty large boxes, each containing upwards of one thousand oranges.

—*Revue Horticole.*

#### Upland Cranberries.

At length we have ocular proof of the fact, that cranberries in the greatest perfection, can be raised on upland, shady and gravelly soil. Mr. Joseph Orcutt has brought us for exhibition, a large root of cranberry-vine, placed in a box, which is made to contain a quantity of the soil from which it had been removed, the vine thickly hanging with ripe fruit. He made the experiment three years ago last May, planting forty bunches in a row two feet apart, without previous culture, merely by removing the sod, and planting the cranberries with no more trouble and attention than he would have taken with a cabbage-plant.

The soil is a sandy gravel, fit for peach trees, and of which five hundred and twenty-three are growing in an orchard so near as to shed their leaves on the cranberry vines.

The first year he picked about a pint of fruit, the second year, four quarts; the third, or present year, from seven to eight quarts of remarkably fine fruit. The vines have shot the present season, three feet six inches in length, are surprisingly strong and healthy, and the old wood is loaded thickly with the finest berries.

We now consider the question, 'Can cranberries be cultivated with success on upland?' as decided in the affirmative.—*Boston Cultivator.*

#### Wearing out of the varieties of Fruits.

MA. EDITOR:—I have always disbelieved the ingeniously supported theory of Mr. Knight, on the natural degeneracy of varieties not renewed by seeds, from having seen trees of the Golden Pippin apple, which was one of the varieties instanced, thriving remarkably well, and bearing good crops of fruit. They were growing in a *very stony* soil, and in a warm situation; and I incline

to the belief that in such situations it would still do as well as any other kind. I should be glad to learn from some of your readers whether they know of any place in America, where it is doing well, as I incline to the opinion that our country is well fitted for its growth, and that a thriving trade might be carried on with the Londoners with it, who prefer it to any Newtown Pippins, Lady Apples, Rhode I. Greenings, and Spitzenbergs, which we now send them. I do not much believe in this innate degeneracy, for in addition to my reasons above, I saw last fall near Philadelphia, a large tree of the old English Autumn Bergamot, a variety literally as old as 'Julius Cæsar,' in perfect health, and bearing in abundance. Yours, JULIUS.—*Philadelphia Florist.*

REMARKS.—I am glad to find that brother Henson agrees with me in his unwillingness to adopt the theory of *wearing-out*. Let us continue to collect evidence against it. Ed.

#### Report from Illinois.

THE greatest evils which fruit growers are called to contend with in central Illinois are, severe and changeable winters, late frosts in the spring, and the various forms of blight and rot.

The severe cold in winter is supposed often to kill both fruit and trees, especially the Pears and Peaches, while, if they escape this trial, the spring frosts often take them. The soil is surpassingly rich, and the trees never fail to do the very best the frosts, insects, and blights will allow. Their growth, and the abundance and fine quality of fruit is almost incredible, when not interrupted by any of these casualties.

The last winter was severe; however, the trees generally escaped injury, but the fruit did not. There are no peaches, few pears and cherries, and but a moderate crop of apples.

The plums are far more abundant than they have been for years before. Those kinds that escaped the frost have generally matured their fruit well; having been totally destroyed by frosts in the bloom the year before, but few of the progeny of the Grand Turk survived the famine to continue their work of destruction this year. However, there is evidence that enough of them survived to perpetuate the race by some means,

and show us that there can be no final remission of the crusade against him. The few that have survived will doubtless obey the command to increase and multiply, and will not forget in future years to act worthily of the renown of their ancestors, as many people do.

But the seasons in which all our fruit is destroyed by cold are comparatively so rare that we could get along with that well enough, were it not for those appalling forms of disease that attack our full grown apple and pear trees, especially the latter—generally, though very indiscriminately, called the blight. We think we have had several forms of this disease; but its present form is far worse than any other.

It first appears to the careless observer on the terminal shoots, which turn black and perish for several inches on the apple, and some times for several feet even on the pear, in a very few hours.

This is generally attributed to the soil or climate, but I am fully satisfied that this is not the cause; for, as a writer in the *Prairie Farmer* has truly remarked, it appeared last year on our native crab-apples and forest trees, especially the Hickories and elms and oaks in this vicinity, as well as on cultivated trees, and on my grounds it was generally worse on Native Seedling Pears raised from the seed for two generations on the spot, than on any others; and much worse on the Native Crab-Apples than on trees more cared for. Besides, this form of blight is beginning to appear in all soils and climates, from Maine to Georgia, and also in Europe; and is it true that no soil and no climate suits the Pear at this particular crisis—not even crab-apples, oaks, and elms? I can not believe it.

I was compelled to believe that it was some change or casualty totally irrespective of both soil and climate, before I discovered what I think to be the true cause.

That *there* is a blight caused by heat or by cold, by soil or by climate, and also by the *Scolytus Pyri*, and by several other insects which infest the pear and apple, I am constrained to admit, from the testimony of gentlemen of undoubted capacity in these matters, and several of these forms of blight I have myself seen on my own grounds.

But there is a form of blight here more fatal to the pear tree especially, than all



these combined, as scores of practical men in this vicinity would readily testify. We all now unitedly believe it to be the work of a microscopic insect, and notwithstanding the strictures in the journals on my hasty article in the *Horticulturist*, I do not know of a single man in this county, who has changed his opinion in the matter, or is likely to do so. We think we know what we see here with our own eyes; whether it exists elsewhere or not, is for others to say. This insect is not a bark-louse of any form, nor is it anything described in the books or horticultural reports, or any more like any of these than a pig is like an alligator or a rhinoceros. Its habits are still unknown, and are likely to be for some time to come. But that it is so small as to be invisible through ordinary microscopes, and seen fairly only under a powerful solar microscope, is well known to many; also, that it infests the neck, trunk, crotches, and larger limbs of trees, upon the outer bark, and diffuses its poison there, long time before the sudden perishing of the terminal shoots, is perfectly apparent to any man who has a jack-knife and a pair of eyes; hundreds have examined and testified to this fact. Even before it was suspected to be the work of an insect, though the casual or careless examiner finds no symptoms of disease until the final, sudden death of the terminal shoot warns him of the danger. Now, in the case of the *Scolytus Pyri* and one or two other unknown insects, this sudden death of the terminal shoot is all there is about it; and generally, at least on the apple, it is all that ensues—though the poison sometimes, even in these cases, will run down on the pear.

But in the case of this new form of insect, or microscopic insect blight, it is far otherwise. I have myself examined hundreds of trees, and I have never yet seen a terminal shoot affected with it, when I could not find obvious evidences of the fatal poison below—some times quite down to the ground; and in such cases the tree will invariably die to the ground, unless something is done to prevent it, though there may be many feet of perfectly sound wood, apparently, between the fatal spot and the withering shoot or twig.

The experience of this year not only convinces us that this is the work of the insect described in the *Horticulturist*, but also encourages us to hope (and only to hope) that

we have hit upon the right remedy; for the trees on my own grounds, promptly treated with soap and tobacco water, spirits of turpentine, and lamp-black, are thoroughly restored; while a single row, omitted for want of time until the insects had hatched and gone into the bark, is still as badly diseased as ever, or almost as badly, the late care probably having done some good. On the contrary, one gentleman, one mile from me, omitted all care of his trees; they were about ten or twelve inches through, and the finest in the county. But they are all now dead, or worse than dead. Another gentleman, two miles distant, sceptical at first, finally, after a personal examination, became convinced, and applied whale oil soap to the blighted trees, with a caustic alkali to dissolve it afterwards, and all his trees are now, as he informs me, free from blight, and in order. Another gentleman washed his apple orchard in simple soap-suds, and I am told it can now be seen to the very tree to what extent he applied it, as all trees so washed are healthy, and all others are blighted. Another still, applied a rope covered with tar, to some of his trees, and says that on those so treated there is no blight, while it is on all the others. This last case, however, I think will be found to be a case of blight that comes from a larger insect perforating the terminal bud, and not from the microscopic insect, so fatal to pears. Another gentleman from Massachusetts, quite unknown to me, wrote me in the spring, that he had discovered the same microscopic insect mentioned in the *Horticulturist*, on his pear trees, and had applied oil-paint with entire success.

Another still, writes from the South, that he has found the same insect there. So that I am induced to believe that this form of blight is not exclusively local. All the above cases, of course, did not come under my own notice, and I can only give the report as given to me. That every apple and pear tree, on my own place, was last year hopelessly diseased, as I thought—that all my privet bushes and hedges were, in mid-summer, killed quite to the ground is quite certain, and that I have now totally eradicated the evil from my premises, except on the neglected trees above specified, and that several of my neighbors have done the same is quite as certain; while those who did no-

thing last year have found the disease to steadily progress toward death, is equally sure. It may be thought that this insect follows the disease instead of producing it; but I think the evidence conclusive the other way, and wrote for the Horticulturist only in order that others might observe and be convinced of the fact—for it would be difficult, and perhaps impossible, to convince any man on this point, who had not examined, thoroughly, for himself, or at least received the testimony of a great many corroborating witnesses who had so examined; and it is not reasonable to expect or ask conviction from sensible men on any other ground—there is so great a liability to mistakes in matters so exceedingly small.

I can, however, state that so far as I know, every person whose attention was seasonably called to the phenomena, was fully convinced of the cause of the evil—and all the remedies adapted to that view have, in every case, so far as I know, proved successful and satisfactory, while all other known remedies have failed.

After the writer in the *Prairie Farmer* spoke of the blight on the forest trees, I found the larvæ of this insect on the elms and hickories in my own yard.

It is barely possible that this blight will be found at last to be, not the result, but the cause of the spread of this insect; but I do not think any such result probable, nor am I aware of any one who has had any fair opportunity to examine the case in all its bearings, who anticipates any such result. The assumption that this insect causes the blight, fully explains all the known phenomena so far—no other supposition does—while that there are other forms of blight caused by insects, and other causes wholly different, there can be no reasonable doubt; but they have never proved so serious and fatal with us as this last form.

I found an apparently similar disease in almost every one of my Newtown Pippin apple trees, in an orchard of about twenty-five acres, on my farm, ten miles from this place. Most of these trees are of this kind, say about eight or nine hundred in number, the rest of the orchard standing, mixed promiscuously together with these, are of other choice varieties, all set out at the same time and in the same manner.

This disease appears most fully on the

rough bark, two or three feet from the ground, where the scion was united to the seed stock, or in the crotches, or in any place where there is any roughness of bark, and when this bark is cut or pared off with a sharp knife, there the disease more fully appears.

There will be found dead, gangrened blotches of bark extending sometimes quite down to the sap-wood, even where the outer bark looked sound and healthy.

These trees are some seven or eight years old, and of fine and healthy growth and appearance, and just coming into bearing—say with trunks from nine to eighteen inches in circumference. Now every one of the Newtown Pippin trees in this orchard have this plague-spot on them, more or less, while not one of any other kind is so affected, so far as I could find. What is the cause of this, will any gentleman explain?

The trees all look as healthy and fine as ever, and as the disease is so latent that it was not discovered till July, quite too late to do anything for their good this year, the probability is that the disease will extend and cause their sudden death, as several have already died at short notice, while in apparently full leaf and growth. I can not say what ails these trees, but I strongly suspect it is the same insect, as is found here at home on the Pear; and I also suspect that it has been the cause of so numerous deaths among the Newtown Pippins, elsewhere ascribed to soil and climate; and it is said lime cures or prevents their death in these cases by its action on the soil; but may it not be its action on this insect after all, about the roots of the tree? I throw out these hints merely as suggestive, and would advise all my friends who find that their soil or climate does not agree with Pear and Newtown Pippin apple trees, to look well to the rough bark of these trees, especially spring and fall, and examine carefully with a knife, and if they find symptoms of disease there, or any unnatural rustiness, or scurviess, or dead blotches, to cleanse them well with a knife, removing all the dead parts, and wash the whole tree in a decoction of strong tobacco water, mixed with about one-fourth strong soap, and enough finely sifted air-slacked lime to make it slightly thick and adhesive. This done in the fall, will also keep rabbits from young

trees, and in July, will kill off or keep off most of the young borers. It should also be done in March or April, for this blight insect, as well as in summer and fall, so as to destroy the larvæ.

Of all the things applied to the roots of the trees, I have found the following mixture did the best on our soil, the last year;—half peck of lime, half peck of ashes, two quarts of salt, one peck of powdered charcoal, dug in about the roots and piled against the stem, in the fall or early winter. Trees so treated, in addition to their washing, gave a more healthy and vigorous growth than from any other application to the root.

As to Grapes we find no remedy for the rot, as yet, though it is far less fatal this year than last. I have dug a pit, 20 feet square, and bricked it and cemented it over top, bottom, and sides, making arched vaults for suds and other liquid manure under the whole, filling the pit wholly with artificial soils—and so constructed as to have at all times from the pits an abundant and regular supply of moisture without any excess. I shall have here a full opportunity to test the various effects of soil alone, and will report to the public in due time.

I have also other experiments in progress for testing the various effects of atmosphere and moisture on other vines, and I hope we shall all labor till the true cause of this deplorable rot is fully searched out.

My own present opinion coincides with that of Mr. Longworth, as I understand him; but I am not, after all, fully satisfied, that this also will not be found the work of an insect, at the root of the vines; for the vines, ten years old, which I took pains to dig out whole, though running over some 20 square feet of earth and some three or four feet deep last spring—presented to me appearances which I could not fully account for on any other supposition. But as I have these now in the pits above named, I shall subject them to future examination.

It should be noted in this connexion that I received this day, (Aug. 25,) from S. Francis, Esq., an editor and horticulturist of Springfield, of well-known and deserved repute in the west, a box of fully ripe Fox Grapes, which mature well in Springfield, Ill., in Mr. Francis' garden, every year, even when all other sorts rot entirely. They are a fine, large, greenish red Grape, of a

round shape, larger than the Catawba; skin rather thick, and not so spirited and high-flavored, though quite good; to my taste inferior to either the Isabella or Catawba; but those more accustomed to them, think them even better. This vine originated from the north-western part of Connecticut, and is there cultivated for its superior qualities. This Grape is worthy of serious attention in Illinois though probably not fit for wine.

Perhaps I ought to remark that I washed two Plum trees with strong soap and tobacco water, trunk and limbs, late in the fall, and again when in bloom, to improve their bark and growth. Sometime in March, also, I covered the ground under these trees with tobacco stems, about one inch thick, as far out as the limbs extended. Now these two trees are so loaded with ripe plums, that I was obliged to prop up all the limbs, to prevent breaking; and there are twice as many plums on them as on any others in the row, and few or no marks of the curculio. I mention the fact to pass for what it is worth. This year I do not consider that any such experiment proves any thing for reasons above stated, though attention should be called to every fact of the kind.

May not the soap and tobacco water have killed all the insects or larvæ, on or about the trunk and limbs? and the tobacco stems those under the tree—or at least driven them away?

Some twelve years ago, I selected a quite famous wild Plum, from the forests in this county, which was noted for its fine flavor, and for its tendency to resist the curculio, when all others failed. It is of good size—rich and sweet—and a gentleman from New York remarked last evening, that he had seldom found so good a Plum in that market, to his taste, as this. The skin is rather thick, and the color reddish yellow, with rusty spots, quite rich and agreeable. From the trees I have propagated from this sort, we almost always have plenty of Plums, without care, even when they fail on all others. What the cause is, unless it be the peculiarity of the skin, I can not say. I intend to improve this Plum still further, by cultivation, as a last hope for the west, till the "Turk" capitulates.

Gooseberries with me do well, when well pruned, manured, salted and mulched, in early spring, never without.

Currants are always abundant.

In this region, Cherry trees, of the finer sorts, generally die about the time of the change of the outer bark, if not particularly attended to.

I enclose a rough draft and description of our most famous August apple in these parts. It was introduced here by Timothy Chamberlain, Esq., and named by him the Orange Apple. He says that the same has been called in Ohio, the Tallow Apple, and in the South, the Hoase or Horse Apple, but this I think somewhat doubtful. The apple I have seen as the Horse Apple, is an earlier and far inferior fruit. This apple now

brings readily one dollar per bushel in our market, while plenty of common apples can be had from twenty to forty cents per bushel.

I regret exceedingly that I shall not be able to attend the Congress; and I do not know that this hasty and ill-digested report can do any good, but I feel confident that under the inspection of such minds as will be there assembled, it can do no real harm, and may be the occasion of eliciting from others, more valuable thoughts and observations in future, on the same topics. It is, therefore, respectfully submitted as it is, by

Yours truly, J. B. TURNER.



## The Garden.

### Coal-Boat Garden.

THE Londoners may be said to be inveterate gardeners. From the dark and sinuous purlieus of Drury Lane and Saffron Hill, to the open day-light squares and crescents of the West End, may be seen some indication of this passion for horticulture. But although in both instances, the same pursuit is displayed, the tastes are evidently different. In the one it may be called a love of gardening, and in the other a love of flowers. In the former it is a taste for cultivation, but in the other an admiration of the thing cultivated.

We have often wondered what extent of cultivation these minds, in the neglected parts of London, are capable of, that display so much refinement in the assiduity with which they nurse a wild Daisy, or Primrose, in a fractured tea-pot or ginger-beer bottle. There is surely something more than the mere animal development here. Our attention has been more immediately directed to this subject, in consequence of the immense quantities of the commoner flowers which are, at this season, continually forced upon our observation, both in the

markets, in the streets, and on hawker's trucks. The Primrose, Daisy, Wallflower, Polyanthus, and Southernwood, are among the most popular; and in almost every lane, alley, and court, may be seen the various degrees of success with which these are kept in life. It is not only in the dwellings of the poor, however, that we have remarked this fondness for gardening. It would seem that some, who perhaps have no dwelling at all, or such an one as does not afford the facilities for indulging even this harmless gratification, resort to other means; and it was but the other day we encountered, in our perigrinations, a well-cultivated and fertile spot on the fore-deck of a coal-barge! Who of our readers would ever have dreamed of a flower-garden in such a spot? Even our assiduous friend, Mr. Beaton, with all his train of fair followers, could never have thought of looking for a flower-garden in such a spot, and that, too, floating on the very bosom of Old Father Thames. And a very pretty garden it was. There were no circuitous walks; no ingenious devices; no grouping of colors; but there were some bright Anemones, of all colors; Polyanthu-

ses with trusses, as Polyanthuses never trussed before; double-lilac Primroses; Hen-and-Chicken Daisies, eclipsing in interest the finest poultry-yard of the greatest fanciers; lumps of Stone-crop, trailing down the sides of old tin tankards; "Bloody-walls," or "Warriors," looking as gay as any officer of the household guards; "Daffodowndil-lies," as our ancestors called them, rich in beauty, and replete with fragrance; with here and there bushes of grim Southern-wood, and the whole artfully and tastefully enclosed with an edging of the whitest of oyster-shells. We have interesting scenes in London which the rest of the world know not of; and such a scene as that now described is more gratifying to us by far, than the luxurious and ready-made window decorations of Belgravia. It is, then, with plants of this description, that our attention has been attracted during the past week in Covent Garden Market.

#### Canvas Houses for Plants.

Among the modern improvements in plant-growing, their summer treatment under canvas may be reckoned the greatest, and although not generally adopted, must be, and will be, by those who can afford it. It must be admitted that the most difficult period of a plant's treatment is after it has done blowing, and is making its growth. In the house it is drawn; in the garden it suffers from sun, wet, or wind, in a pit it is little better. But having seen in an amateur's garden a canvas house, with a rolling roof, and the sides composed of canvas flaps or blinds, which could be propped out square; and in one of the most broiling afternoons of the summer, finding this house cool and airy, and the plants fresh and vigorous, I was struck with the simplicity of the contrivance and the superiority of the plan over all others for the summer treatment of plants. In this house were camelias, heaths, hard-wooded Botany Bay plants, cacti out of bloom, Indian and hybrid azalias, rhododendrons, and, in short, the turn-out of all the houses but the stove, and it was impossible they could be doing better. The foliage was green and healthy, every thing well-set, and all that could be wished. The day was calculated to show off the excellence of the house; the rolling top was down on

one side and half-down on the other, the blinds were propped out horizontally, so that there was all the air that was stirring, and no sun. The paths were damp, having been watered in the morning, and the temperature was so much lower than out of doors, as to be almost incredible.

I found the treatment was nothing more than in June to turn out into this house every thing that had done flowering, to continue adding all the summer every thing as it finished its bloom according to the weather, to close or open the house, which, when the roof was rolled up and the blinds propped out, was to plants the same as out of doors, but, when closed up on the sides, the top cloth let down, was warm; in dull days and mild showers the plants had it all; no sharp cutting winds could touch them, because the blinds and roof were always kept down on the windy side in these cases, if not all round. They never required half the water, and so close was the house when shut, that, in case of being troubled with the aphides, it could be fumigated as well nearly as in a house of glass. I must say that I view this little improvement in practice as a great advance, for, although we have all our sheltered nooks and sequestered places for summering our plants, the best are poor securities against brown foliage, scorching or dripping, damage of the young wood, or disappointment at the moment of setting for bloom.—*Gardener's Chronicle.*

#### Lycopodiums.

SUMMER TREATMENT: POTTING.—Having read the compost, as described in my last, and the plants being in such a state as to require larger pots, proceed to perform that operation. The best time of the year for this work is about the middle of April, though it may be done through most of the summer months, if the plants grow rapidly, and fill their pots and roots; especially if large specimens are required. There are no plants that show the effects of neglect in this point more than Lycopoda. If the pots are too small, the plants soon lose their healthy, brilliant green; the tall growers become naked of leaves at the bottom; and the whole plant becomes a sickly yellow, which renders it a very unsightly object. To prevent this, pot early, while the plants are of a good color, and pot again in time to

keep them so. Though they love plenty of moisture at the root, yet they can not bear stagnant water: hence it is necessary to drain the pots well, and place a thin layer of moss over the drainage to prevent its being choked up by the finer particles of the compost being washed down into the drainage with the frequent waterings. The pot being thus properly drained, and the compost being neither wet, dry, nor cold, take a plant, turn it out of the pot, pick out the old drainage from among the roots, and as much of the old soil as can be removed without injuring them. Then put as much compost in the pot as will raise the ball nearly level with the rim of the pot; fill round the ball with the fresh soil, pressing it down gently till the pot is quite full; then give the pot a smart stroke or two on the bench, pressing down the ball and soil level, leaving about half-an-inch for small plants, and an inch for large ones, or space below the rim of the pot. This space is to hold water, so that when the plants are watered there may be sufficient to thoroughly wet the whole mass in each pot. Then give a liberal watering to settle the soil close to the roots, and replace the pots on the stage or benches where they are to grow.

All the stove species thrive best in rather shady places. I used to find them do well on the curb-stone round the pit in the stoves and orchid-house, where very few other plants would live and thrive.

**WATERING.**—These plants are found growing in shady thickets where there is a continual moisture; and, therefore, to keep them fresh, green, and healthy, they should have a frequent supply of moisture both at the root and top. The syringe, then, is a most useful instrument; and they will thrive all the better if they are syringed twice or thrice a day in the hot days of summer, especially all such as throw out roots from the branches in the air. An exception occurs to this practice of syringing so freely, in *Lycopodium obscurum*, and *L. casium arborescens*. If these are syringed abundantly they lose that rich, glossy, grey-blue color for which they are so much admired. Once in every two or three days will be sufficient for them to keep them healthy. This rich color will be obtained and preserved best in a shady place, with a high moist temperature.

The tree Lycopod grows very rapidly, and,

on account of the fronds being large, spreading, and heavy, it is necessary to support it with stakes. I used for large plants, in eleven-inch pots, five upright stakes, kept steady, and at equal distances, by a ring or hoop of the same diameter as the pot; each stake was tied to this ring, which kept them steady and in their places. To these stakes so secured, I tied each frond as it was produced from the main stem. They formed, then, five upright dense bushes, covered with their richly-colored leaves, which color I preserved by never allowing the sun to shine upon the leaves, and using the syringe but seldom.

**HEAT.**—All the plants of this genus will bear a high temperature. During this season (summer) I have had the thermometer in the middle of the day, with sun, as high as from 85° to 90°, and these plants seemed to delight in such a high temperature, growing rapidly, and of the liveliest colors. Some of the green-house species, indeed, grew rather too rapidly, over-running their pots, and hanging down over the edges; but then they are so easily propagated, that when they became unwieldy or unsightly I had no hesitation in casting them to the dunghill. Some of the low-creeping kinds I have cropped off close to the soil, and in this high moist temperature, they almost immediately pushed forth fresh shoots, and formed fresh beautiful patches of the liveliest green. The great heat, however, is not absolutely necessary, and, except orchid growers, very few cultivators have a house heated so high. It was in the orchid-house that I cultivated them principally myself, and much admiration they always attracted. They will grow, however, very well in a common stove, the heat of which should never exceed 70° to 75°. Some species thrive pretty well in a green-house; these are *L. denticulatum*, *L. apothecium*, and *L. adnatum*. In this house I would cultivate all the British species, of which the most beautiful is the *L. clavatum*, or Club Moss, as it is commonly called. These hardy species may be grown very well in a cold pit, but they are worthy of a place in a green-house.

**WINTER TREATMENT.**—It is during this season, when flowers are scarce, that the beautiful green and purple shades of these plants show to the greatest advantage. The only difference in culture is the giving less

stimulants to growth, such as heat and water; also the syringe must be dispensed with, and the plants just kept slowly growing.—*T. Appleby, Cottage Gardener.*

### Asparagus.

It is delightful to find our views and prepossessions confirmed by those of large experience; my views upon the moot point of white and green Asparagus, and of the necessity of giving this plant more room to develop itself, by wide planting, have already been presented in previous numbers. I am therefore glad to find them confirmed by so famous a gardener as J. Cuthill, of Camberwell, in "The Scottish Florist:"

The market-gardeners round London are now producing Asparagus much better than they used to do, since the absurdity of only having three inches of eatable matter at the tops has been so much exposed. They are also reducing the enormous covering of earth, of from twelve to fifteen inches, to six or eight inches; also by allowing the Asparagus to rise about four inches above the earth, this will give something like six inches of eatable matter. This is just the plan of the private grower, and I believe that Asparagus grown by the gentleman's gardener is as fine again in flavor, as well as containing much more eatable matter.

There is but one kind of Asparagus. A Mr. Grayson, an extensive grower on the south bank of the Thames, introduced what he called his "Giant" Asparagus, but it proved to be only the usual kind. He made it a "Giant" by putting mold over a few of the very largest heads he could find on his extensive beds, which covered about thirty acres. The heads were cut and shown in market as a new sort. They were about eighteen inches or more in length, and a hundred heads weighed forty-two pounds; but, unfortunately, like other Asparagus, only three or four inches were fit for eating. There can be no doubt, however, that the present plan of saving seed from the strongest plants has much improved Asparagus.

As it is my intention to discountenance the production of long white drum-stick Asparagus as much as I can, I beg leave to advocate the following plan, by which in time

every row will form its own bed. I propose that each row be planted three feet distant from the other, and that each plant stand one foot apart in the row. This will give ample room for cleaning the crop, and for drawing up earth over the crowns, so as to form a ridge three or four inches deep, to be lowered again for the purpose of enriching the soil in the autumn and winter. By this method I consider that Asparagus might be cut at least ten days earlier than it is, by the plan now practised of burying the roots deep in a bed of earth, where sun and air can not act upon them; and as for flavor, it has long been proved that although gentlemen's gardeners do not grow Asparagus so large as the market-gardener, of the two it is by far the finest in flavor, with at least three times more eatable matter in each head, though only two-thirds the length. I have had Asparagus sent to me from Brussels, all blanched together a beautiful creamy white; but, when cooked, I could not discover the taste of Asparagus in it. It was watery and insipid, as highly blanched Asparagus must always be, having only the watery flavor of the roots. I have proved this years ago, by keeping it in frames shut up, and the glass covered over with mats to exclude light.

I imagine that I have said enough to explode the old-fashioned and expensive plan of growing this much-esteemed British vegetable. Some imagine that unless the roots are covered during winter, the frost will kill them; if roots are moved during winter, the wet will rot the uninjured tubers, and no gardener who understands anything of vegetable physiology would think of lifting the roots for planting until February or March, unless for forcing, and the latter are put into heat at once; but Asparagus is perfectly hardy. The plan of putting large quantities of manure on it during winter, is nevertheless good; for the winter rains wash the strength of the manure down among the roots. I should give the ground a good salting annually in February, and when cutting is discontinued in June, I would *soak* with manure-water, or town sewerage-water better still, or even spread on dry artificial manure, for the heavy rains will soon wash the strength of it among the roots, and just at the time when the latter are making fresh crowns for next year's crop. This is no doubt the

proper time to manure Asparagus. If the above method of cultivation is adopted, I doubt not that its benefits will soon be discovered not only in the shape of improved "grass," but also by the consumer. I believe that it is impossible for the grower to alter his mode of culture without the assistance of the consumer, and I am sure that by the plan I have just been advocating, the drain on the roots will not be half so much as it is now, owing to the fact of the latter having to form such a quantity of underground sticks, ultimately to be thrown away. Wherever it is practicable, Asparagus ground should slope to the south or southeast, and the rows should always run south and north. Where the land is light, plows might be used in throwing up the ridge on each side of the row, and then it could be forked over. The chief labor and expense will be in cutting and sending it to market, which will form employment for the people in the neighborhood. It order to prove what the exclusion of air has to do with not only the flavor, but the hard or woody texture of the stem, (under protracted growth,) I had several heads of Asparagus just out of the ground covered over with long cucumber-glasses, and all air excluded. When the stems reached the top they were cut and boiled; but they were so hard that not even the top could be used, proving at once that without plenty of air, the stem gets tough and useless.

#### New Roses.

In Turner's Florist is found a notice of the novelties in this lovely family of flowers, to which the attention of cultivators is directed:

The new Bourbon roses are comparatively few; some of them are, however, first-rate additions to that family. Appoline is one of the prettiest, clear pink, a seedling from Pierre de St. Cyr, on which it is a most decided improvement, being more compact, better formed, one of the freest late bloomers, and of robust habit; and as a bouquet flower it has the approbation of the most distinguished merchant in London. Aurora de Guide is violet-tinted crimson, and a dark flower. Duchesse de Thuringe is, for a small-cupped rose, a perfect model; its color is light flesh, its habit dwarf, and it is quite

a gem in the autumn. Furie is a very free-blooming bright crimson; but hardly distinct enough from some of a similar color in this family. Louise Odier is a finely-formed strong-growing variety, a bright rose-color, and an excellent addition to the pillar varieties. In Menoux we have one of the most brilliant recent additions; it is truly described as "glowing carmine," of dwarf habit, and strikingly beautiful. Prince Albert (Paul) is a decided improvement in habit and increased size on Comice de Seine et Marne: in color they are very similar, the Prince being somewhat more brilliant. Scipion is a crimson-tinted scarlet, very vivid pleasing color. Vorace is, however, in my estimation the gem of the dark novelties of this section; it is of the most beautiful shape, of large size, and a rich deep velvety crimson, and may be described as a perfect flower; it has also a depth and substance of petal that induces me to believe that it will prove the first fine dark-cupped show-flower (as a single) that has yet been introduced among the perpetuals.

The most recent additions to the Noisettes are, Caroline Marnisse, a counterpart of Felicité Perpétuel, now really a perpetual; Narcisse, a delicate pale yellow, not large, but beautifully formed; and Octavie, a novel bright red, of medium size, and an acquisition to this group.

To the Chinas no very desirable additions have been made lately that I am aware of; but to the Tea-scented we have a few which may be said to be valuable. Madame Willermoriz is a large fine variety, very distinct and beautiful, being white with a nankeen or pale buff center; its form is of a deep cup, the petals stout, and for one of this family it appears quite hardy. Souvenir d'un Ami is one of the largest, much of the same shape, size, and quality; its color is a clear pale flesh, and may be termed of robust habit. Madame de Sombreuil is a fine large blush with a yellowish tint, of the right form; but of its constitution I will not this season venture an opinion.

Having brought the list of perpetuals to a close, I proceed with such of the more recently introduced summer varieties as may yet be considered desirable to cultivate, although the perpetuals are fast superseding them.

A curious addition has been made to the



Provence section in *Narcisse de Salvandy*, (*Van Houtte*) being a bright crimson with a white margin; it is not very double, nor can its peculiar marking be always relied on, but as a picturesque rose in a group it is unique; the new striped *Provence*, white with pink stripes, has, however, the character of constancy, which makes it very desirable.

To that charming tribe the *Mosses*, we have recently added *Nuits de Young*, a rich velvety deep crimson, not very large or double, but the color makes it attractive; and *Jenny Lind*, crimson, the buds of which are so thoroughly mossed as to obtain for it the flattering title of the *Queen of the Mosses*.

Added to the *Hybrid Bourbons* we have a fine flower in *Paul Ricaut*, vivid crimson, of good shape; one of the best adapted for exhibiting singly.

In *Hybrid Chinas* the most recent introductions are the four *French Generals*, *Al-lard*, *Changarnier*, *Lamoricière*, and *Jacqueminot*; the first is reddish rose-color, of good shape, and a good pillar rose; the second, a fine, large, deep crimson; the third, a bright pink, well formed; and the last, a dark red, and a model in shape; the first and third frequently giving autumnal blooms, particularly if some of the longest shoots are reduced to half their length during the summer.

#### New Pompones Chrysanthemums.

THESE beautiful little gems are everywhere attracting our attention — the Horticulturist has given a most highly colored bouquet of them in a recent number, sufficiently rich and gaudy to attract the attention of the indolent African, the stolid Indian, or the phlegmatic, tulip-admiring Dutchman. I have always entertained great admiration for this class of autumnal flowers; the larger varieties have many attractions for me, but modern art with a new section of the family has produced a wonderful improvement. — Mr. Hovey considers the latest seedlings the best, and gives the following varieties from those he flowered last year. Do not, however, throw away those we have already proved.

Few flowers have exhibited greater improvement in the same space of time, than the *Pompones*, or *Daisy-flowered Chrysanthemums*. It is not long since Mr. Fortune first introduced the original small-flowered variety, or *Chusan Daisy*; yet in a period of six or eight years, more than two hundred fine seedlings have been produced by the French and Belgian cultivators.

At first they were little better than the original in shape, but varied in color; successive seedlings became of much better form, till now they are almost as perfect as the *ranunculus*, and of nearly every shade of color, from white, through the varied shades of yellow and orange, to deep purple. The seedlings of 1852, are a very great improvement on those of 1851, having better petals, and of more delicate colors, the prevailing tints having been heretofore yellow and orange.

A collection of upwards of twenty of the newest, flowered with us last year, and we made brief descriptions of them, which we now give, that the amateurs and admirers of this fine flower may see the great variety already produced; they are as follows:—

1. *ARIANE*, (*Pertuze's*). Straw edged with carmine; flower very double, perfect; colors quite new.

2. *ATTALA*, (*Lebois*). Pale rosy lilac and soft white: flower very double; form, cup shaped, admirable.

3. *ATROPOS*, (*Bernet*). Crimson maroon, with orange center; flowers small; beautiful form; very full and double.

4. *BOUQUET PARFAIT*, (*Pertuze's*). Color, ash lilac, with a reddish center; flowers small, expanded, and appearing in enormous bouquets.

5. *CROUSTIGNAC*, (*Lebois*). Yellow, striped and shaded with carmine and crimson; flowers small, very full and double; a superb variety.

6. *DAME BLANCHE*, (*Lebois*). White as snow; petals fringed like *Camelia fimbriata*, imbricated and beautiful; flowers good size, very double and full.

7. *GRAND SULTAN*, (*Pertuze's*). Carmine maroon, a rare color; flowers beautifully formed, very full and double.

8. *GRAZIELLA*, (*Lebois*). Blush white; flowers large and cupped; one of the most perfect varieties yet raised.

9. *JASON*, (*Lebois*). Deep yellow;

flowers large, and in the perfection of imbrication.

10. JONQUILLE, (Pertuze's). Rich jonquil yellow; flowers cupped; very perfect and beautiful.

11. JUSTINE TESSIER, (Lebois). Pure white; flowers small, very compact, imbricated, and the perfection of form.

12. LAIS, (Bernet). True purple; flowers large, very double, and superb form.

13. LA ROUSSE, (Pertuze's). Red, with a shade of yellow, new colors; flowers small, of admirable form, compact, superb.

14. LOUISE PETOU, (Lebois). White; flowers small, flat, double, and appearing in very large bouquets, which have a grand effect.

15. MADAME JULES D'EVERY, (Lebois). White, slightly tinged with blush; flowers large, very double, cupped, and beautiful.

16. NELLY, (Lebois). Pure white and soft yellow; flowers large, imbricated, perfect.

17. NELLY LE CLEROQ, (Miellez). Purplish lilac, center white; petals slightly fringed and tinged at the ends with white; superb.

18. QUASIMODO, (Lebois). Yellow, with the reverse of the petals bright crimson, producing a grand effect; flowers medium size; petals quilled.

19. ROSE POMPON, (Lebois). Rosy lilac and soft white; the ends of the petals slightly tipped with white; flowers small, very double; petals quilled.

20. SATHANIEL, (Lebois). Rose and white; flowers large, capped, very double, and superb.

21. TACITE, (Pertuze's). Pale rose, tipped with carmine; flowers small, very double; beautiful and superb.

22. ZEPHYR, (Lebois). Primrose, with a deeper center; flowers quite small; petals imbricated and slightly fringed; a charming variety.

23. AVRODIFLORUM, (Lebois). Clear pale lilac; center yellowish lilac; flowers medium size; form regular. This is the finest *anemone* flowered variety that has been produced.

24. JUNON, (Miellez). Pale yellow with orange center; flowers large, well shaped, and beautiful. This is also an *anemone*-flowered variety.

The culture of the pompone varieties is

the same as for the large flowered ones, which we have given in our previous volumes; but for the information of those who may not have them to refer to, we, in part, repeat here. Cuttings may be put in in May, or the old roots may be divided, leaving only one shoot to each plant, and potted off in small pots, till they get well established. when they should be immediately shifted into a larger size. The only thing important is, never to let them get too *pot-bound*.

Cuttings inserted in sand, or sand and loam, in a slight heat, will root in a few days, and when potted off, should be treated like the suckers.

The soil for the early pottings, may be rather light and sandy, but the later shifts into the flowering pots, should be in good sound loam, mixed with about one-half very old manure and leaf-mold.

Plunge the pots all summer, not too crowded together, in a good airy situation, not likely to be damp at the roots, which they dislike. Never allow them to flag for want of water.

In July pinch out the top shoot, which will make them throw out three or four side-branches to form a good head. Water with weak manure water or guano, after September, and remove to the house before severe frost.

To have fine heads of bloom, thin out the weak buds.

#### *Dentzia Gracilis.*

This pretty new plant previously mentioned in these pages, is thus noticed by Mr. Hovey. It is indeed very much to be hoped that it will prove hardy, but even its closer congener *D. Scabra* has been severely cut some winters.

It appears from a recent No. of the Cottage Gardener, however, that it has proved hardy in England, even when a young plant was exposed. The editor, Mr. Beaton, considers it the prettiest and most useful little shrub yet found in Japan. Every body should have it, and those who can, ought to have it in flower, from January till the middle or end of May; it is also as much of a wedding flower as any we have, and seems to

have been made on purpose for hair-wreaths, or for sprigs singly to use of an evening, as imitations of the Lily-of-the-Valley while in the bud, and in its own strength when it opens.

This lovely species of the *Deutzia* has been beautifully in bloom in our collection. The plants are yet small, not more than six inches high; but small as they were, they had one or two wreaths of its snowy flowers. If it prove hardy it will be, undoubtedly, one of the most elegant shrubs which have been added to our collections, not even surpassed by the *Spiræa prunifolia* pleno. It has a very slender habit, well deserving its name.

#### New Shrub.

**ABELIA UNIFLORA** *Brown*. **LARGE-FLOW-ERED ABELIA**. (*Caprifoliaceæ*). China.—A very pretty shrub, much resembling the *Weigelia rosea*, but more profuse in its bloom. In England it has proved perfectly hardy, and, as it was found by Mr. Fortune in the north of China, in the same locality as the *Weigelia* and *Forsythia*, no doubt it will be hardy with us; if so it will be a great acquisition. It forms a spreading, somewhat decumbent shrub, with broad, lanceolate, subcoriaceous, dark green perennial leaves. Flowers white, tinged with blush.—*Bot. Mag.*, Jan.

#### The Pansy.

THERE is not, perhaps, a greater favorite in the whole category of Flora's extensive field than the Pansy. Whether it be known by the local appellation of Johnny-jump-ups, Hearts-ease, or Cull-me-sweet, it is still the same universally admired pet, particularly with the fair sex. It matters not if the peculiar construction which may be put on the sweet words made use of in designating it, has any influence over the mind, there are charms enough belonging to its external appearance sufficient to win the admiration of all flower lovers. An emblem of modest beauty and graceful loveliness: we are reminded of the fairest daughters of Eve, and well do the ladies acknowledge the compliment which nature has paid to them, for it would be a difficult matter to find one who

would not contract the ruby lip at the sight of a fragrant "Pensee."

Notwithstanding the many attractions which it inherits, we seldom see its beautiful proportions and bright and varied colors in perfection, or even the cultivation rightly understood; still this is simple and inexpensive, and can be accomplished with little trouble.

The Pansy, although so generally admired, is only a naturalized republican. The species of *Viola*, tricolor and lutea, have each contributed to make up the amalgamation of the different classes of colors which it exhibits. *Viola tricolor*, in its native state, is found in cultivated fields and hedge rows, and *V. lutea* generally on the sides of elevated hills. Often have I been enchained to the spot by the sight of this lovely gift of Flora, while botanizing in Alpine districts; oftener has its aurean splendor and modest effulgence captivated the senses of many a botanist, and made him forget the world and its dizzy throng. The singular natural beauty of the Pansy, has long since brought it under the changing operations of the hybridizing florist, and all the important (with him) standards of form, color and size, have been established in outline and texture, till perfection has mounted the last pinnacle; but this standard of excellence is not seen in the long horse-jaw formed flowers and muddy colors that we generally meet with! It consists of a well-formed, smooth and circular outline; the petals thick, firm, flat, and each overlapping the other, so as not to show the divisions. Whatever the colors, they should be clear, bright and well-defined. If belted, the margin ought to be even and not run into the ground color of the center, which center should be of a uniform shade. The size of the flower is but of secondary consideration, but to be up to the standard, ought not to be less than two inches in diameter, (I have occasionally had them three inches) and supported on a foot-stalk, elevated above the foliage. The eyes should be either a well defined blotch upon the base of each of the three lower petals, or finely feathered. The blotch is generally acknowledged as best, but when prettily pencilled it does not disqualify as an exhibition flower.

It appears somewhat strange that there are so many ladies who seem so enthusias-

tically fond of flowers, and yet so few attempts are made by them to cultivate and improve these mirrors of themselves. Surely there must be a screw loose somewhere. Is it that they consider the matter as beneath the dignity of "Woman's Rights," or does it proceed from ignorance how to proceed? Let us hope, though possessing knowledge generally, that the latter is the cause in this case; and shame be to him or her who does know and will not assist in this much to be desired education. Would that we could induce our "Faries" to shun the parched atmosphere of dry stoves, and their accompaniments, consumption and imbecility, by becoming florists and observers of nature's vegetable laws; when, instead of the sickly hue of the falling leaf, we should see their lovely cheeks blush as a "summer's rose," and their movements show truly "the elastic tread of woman." The cultivation and improvement of the Pansy offers a wide scope, and is particularly adapted to the fair sex, and if the following directions are followed, gratification will be the result.

In order to improve the flowers of the next generation, the surest way is to hybridize between two of the best qualities, and both flowers should be of the same class or markings; for instance, one may be large but not well-formed, or dull in color, and the other possess good form with bright and distinct markings, but small in size; take the pollen off the anthers, (the little ring surrounding the point in the center of the flower), of the small one with a camel's hair pencil, and dust it over the stigma, or little point of the other flower, which will cause the pollen to adhere and secure the cross; afterwards mark the flowers operated on by tying a piece of thread round the stalk, and remove at the same time all others but those impregnated on the same plant; cover over for two or three days with a small net, sufficiently open to admit sun and air, but close enough to keep out bees or flies. The same results may be more imperfectly gained by simply choosing seed from the best flowers, but the extra trouble becomes a pleasing operation, and will amply repay by the greater certainty ensured.

As a winter and early spring display is desirable, the seed should be sown about the beginning of August, in a moderately rich ground, and shaded situation, protect-

ed from violent storms of rain, and toward the middle of September the young plants should be removed into a frame, freely exposed to the sun, and placed about four inches apart in a good loam, encircled with rotted stable manure. Leave off the sashes till toward the middle of November, and when frosty nights occur put them on, giving plenty of air through the day. As severe weather comes on, line round the outside with eight or ten inches of mold, littery dung, or a thatching of clean straw. In fine days continue to give plenty of air, but avoid cutting winds, and cover at night with straw mats, or other material, to keep out the frost. When the soil becomes dry, give a good soaking of water, choosing a fair morning for the operation, but through the winter it is better to be too dry than over moist, and if any warm showers should occur, take advantage of them by drawing down the sashes. If the above is attended to, there will be a good blow of flowers through the winter, and in March and April the plants will be covered. It is advised to plant four inches apart, which will be enough till the first flowers show, when all of bad quality may be removed, and leave the better ones sufficiently apart for future growth.

The above is intended for winter and early spring blooming, and entails a little extra exertion; but the Pansy is very hardy, and will stand the winters with no more protection than a covering of cedar or other like branches, to keep off alternate thaw and freezing, caused by the bright sun immediately following frost. In this case the bed should be well-enriched with a dressing of good rotten manure, and planted as recommended above, and if a shaded spot is chosen, the plants will continue to bloom most of the summer, and on to the winter following.

When a good variety is obtained, it is desirable to retain it, which may be done by planting out in a well enriched, damp and shady place, before the heat of summer comes on, and the tops or flowering shoots cut off at the same time; here let it remain till fall, when it can be taken up, and will admit of being divided into single shoots, each having roots at the base, which in their turn make equally large plants; slips also, or side shoots, taken off early in the spring or in

the fall, and planted in a shaded place, will strike root. In the heat of summer, cuttings generally damp off, whatever care is taken of them.

By the above practice I have succeeded well with this little gem, and have several seedlings equal, in quality to the European show flowers, and feel convinced that with care and perseverance, we can in a few years rival their standard; only plant a portion of stock in a damp and somewhat shady yet open situation, and the Pansy is as much at home, and as easily grown as it is in Britain.

WM. CHORLTON.

New Brighton, S. I.

#### Salt for Worms.

PROFESSOR MAPES states that common salt applied to the soil will do away with every grub, wire-worm, or other insect so destructive of corn and other vegetables.

He applies it as a top-dressing in the proportion of about six bushels to the acre. He says:—

I apply that quantity every year, to every acre of my land, and since adopting this practice I have never lost a plant by grubs. My neighbors, who are afraid to try salt, continue to lose theirs, and are compelled to buy my cabbage and other plants, to re-set their beds.

Its value as a *fertilizer* is also worthy of consideration. It is composed of chlorine and soda, and these ingredients are defective in many soils. It also has the property of attracting and retaining moisture, as well as ammonia and other gases which add to the fertility of the soil. Our farmers can easily test it in a small way by procuring the refuse salt of packing houses; or it will not be a very expensive experiment to procure even fresh salt for the purpose.

#### Culture of Chicory.

It is well known, probably, to most of our readers, that the root of Chicory (*Chicorium*, Linn usually called succory) is extensively used as a substitute for coffee, and to mix with coffee. The flavor of the chicory in the mixture, is thought by many to be an improvement on the coffee, and the prepared chicory root is sold to a considerable extent

in this country, as "Essence of Coffee," and other names, for the purposes of mixture.

The Mark Lane Express of July 5th, 1852, contained the following notice of the value of this plant:

"Chicory will turn out to be one of the most important agricultural, as well as horticultural roots that, perhaps, nature has ever given us. Every part of it is of great value—top and bottom. Bleached for salads; green for cattle, sheep and lambs; the roots for cattle, as well as a substitute for coffee. Immediate attention ought to be paid to it. Every seed-merchant possesses the seed of it, and it is exceedingly cheap. If chicory was largely grown by the cattle and sheep farmers, much less disease would prevail, and more milk and butter would be produced, and more healthy meat, as it is so fine a bitter, and purifier of the blood. The root is largely grown in Yorkshire, to mix with coffee. One fault is, that by trying to get a large crop, we injure the flavor."

Why will not some of our enterprising cultivators procure some of the seed, and try the culture of chicory, here? It, undoubtedly, would be quite as profitable as in England, where it is said that the root can be afforded at about half the cost of coffee, and it is affirmed to be much more wholesome. Whether the common *Chicorium*, frequently found growing wild by the roadsides, is the true chicory of commerce, or not, we are not informed, but have supposed that it is. Can any of our friends enlighten us on this subject?

NIAGARA FALLS.—What becomes of the proposition to ornament this place as a National Park—is it to be a Lowell rather?—Ed.

The Hydraulic canal at Niagara Falls, which is about to be commenced, is to be three-fourths of a mile long, seventy feet wide, and ten feet depth of water; and is to be cut with perpendicular sides through a solid lime-stone ledge. The water power is the most magnificent in the world; unlimited in supply, and unaffected by either flood or drought—having all the upper lakes for retaining, and Lake Erie, twenty miles above, for a distributing reservoir. There is a clear fall, including the rapids and the cataract, of full two hundred feet.—*Artisan*.

### Broom Corn.

In the Mohawk Valley, New York, vast quantities of this crop are annually grown. Pennsylvania, Ohio and Connecticut, are the next largest producers of it. Its origin, as a cultivated plant in this country, is attributed to Dr. Franklin. It is a native of India. Franklin saw an imported whisk of corn in the possession of a lady in Philadelphia, and while examining it as a curiosity, found a seed which he planted, and from this small beginning, arose this valuable product of industry in the United States. In the same manner, England and America are indebted for the Weeping Willow, to the poet Pope, who finding a green stick in a basket of figs sent to him, as a present, from Turkey, stuck it in his garden at Twickenham, and thence propagated this beautiful tree.—*Working Farmer.*

### Soap Suds.

THE value of this liquid as a stimulant of vegetation does not appear to be generally appreciated by our Agriculturists, many of whom make no use of it, although, from their well known habits of enterprise and economy in other matters, we should have been led to expect *better things*. In a state of incipient putridity, soap suds is replete with the element of vegetables, in a state of actual and complete solution; the only condition, indeed, in which it is susceptible of absorption and assimilation by the roots of plants. Besides its value as a powerful stimulant, it possesses, also, very potent anthelmintic properties, and when used in the irrigation of garden and field crops—the best way, perhaps, in which it can be applied to vegetables—operates as a speedy and effectual remedy against the ravages of bugs, worms, and most of the aligerous or winged depredators, by which vegetables are so often infested and destroyed. It is, also, a most valuable adjuvant in the formation of compost. For this purpose, a large tank or vat, capable of holding from three to four cart-loads, should be constructed in some place easy of access, and to which, without difficulty, the wash from the sink and laundry can be regularly conveyed. Into this reservoir all the wash matter produced on the farm and about the mansion, should be thrown—bones, refuse, ashes,

muck, turf, rich soil, and chip-manure from the wood-shed; in short, every substance capable of absorbing the rich, fertilizing liquid, and retaining it for the benefit of the soil and plants to which it is to be applied. By a little systematic attention to matters of this nature, the annual produce of our agriculture might be immeasurably increased, and the productive capacity of many farms, now regarded as almost worthless, placed on a footing equal, indeed, if not superior to that of the most fertile. Nature has everywhere supplied in munificent abundance, the means of fertility, and we have only to appropriate and apply them judiciously, to secure the best and most flattering results. Some agricultural writers have estimated the value of a hoghead of suds, in a state of incipient putridity, to be very nearly equal to that of a cord of prepared manure. This is probably an *over* estimate: yet, no one who has applied suds to vegetation, and carefully observed the results, can be otherwise than convinced of its very great efficacy and value. Where it is used in composting operations, it may be applied in its crude state, before fermentation has taken place. It will ferment in the heap, and thus induce a powerful chemical action in the ingredients, which will be in proportion as to power, to their number and character, and the manner, or rather thoroughness with which they are intermixed. With a sufficiency of soap suds and urine, a valuable compost may be made of any soil—even sand. W.

—*Farmer and Mechanic.*

### Strawberry Seedling.

HAVING paid attention to the cultivation of the strawberry for some eight years past, in a small private garden capacity, in order to understand its character; and from the *practical* information obtained, I must confess my surprise, in seeing in number 8 of the Review, under caption of "strawberry theory," quoted as Mr. Meehan's notes on the culture of that fruit, presented to a *Horticultural* society, by a *practical* and *theoretical* gardener; from the account, we suppose, that he intended to assert, in this

enlightened day, with all the information of the age circulating around him, that a given variety of this fruit, (Hovey's for instance,) under a certain routine of culture, should change its character from *pistillate* to *staminate*, and *vice versa*. Now I have had Hovey's for years, and never yet observed any change in its character; true, in last year's planting, some other plants with a similar leaf have appeared in the new beds, notwithstanding our care in selecting them, but there is a wide difference in the fruit—they show themselves to be intruders from some adjoining border, or else a *worthless* seedling has sprung up in the old bed, from whence we took plants. I am firm in the belief that of whatever character as to flavoring, etc., a seedling strawberry first shows itself in the runners, therefrom will be continued unalterably the same variety; but the *size* and *flavor* is often improved by high culture, and seedlings will not always exhibit their true character as to productiveness, etc., the first year, requiring a longer period to test them fully. And this is also the case with many other seedling fruits, etc., and also some seasons are more favorable to their growth than others.

Articles in the Review on the culture, etc., of the strawberry, are very interesting to me, and those over the signature of N. Longworth elaim special notice; hence I would be much pleased to see a chapter on the rearing of this delicious fruit from the seed, and not only this but also the raspberry, etc. [The writer will find just what he asks for on page 440.]

My little experience is in the open border: take the seed from the berry and wash them clean; dry enough to prevent molding in the shade; fold up in coarse wrapping-paper; lay them by in a dry, cool place till fall, then sow in a well-prepared border, that will not bake hard by the sun, in drill or broadcast—labeling as you sow. The plants

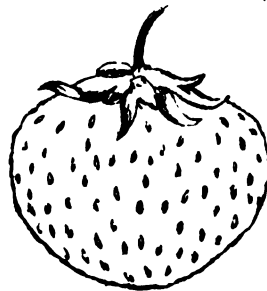
will appear next spring; the following autumn set each variety in prepared beds for fruiting the following year.

Enclosed is a drawing of seedling strawberry No. 10, of my own raising. It is of



[MOYE'S SEEDLING.]

good size, as the sketch shows, and fine brisk flavor; quite dark red, with red flesh; and a profuse bearer; raised from Hovey's



[IOWA.]

(artificially) fertilized by the Iowa. It is rather darker than either of its parents, and throws out trusses similar to the Iowa. I have bred a good many varieties, but this

is the strongest growing and hardiest *pistillate* I ever had under cultivation. This is its second year's bearing, and I have delayed writing on account of some seedlings which I was waiting to ripen their berries that I

might better understand their character. Nos. 23 and 33 give promise of being worth attention. I have a few of what was sent me for "McAvoy's Superior," but the size of the berry don't fill the description. "Burr's New Pine" is a charming berry; and the "Ohio Mammoth," in flavor, is better than Hovey's.

My opportunity is not good for obtaining choice raspberry seed, hence I was about to ask the favor of thee to put me in some channel whereby I might obtain such, as I feel willing to try my hand on that fruit also, if this is not taxing thee too heavy.

I have a seedling grape or two that promises to be something, if there is anything to be known by the leaf. Respectfully,

L. S. MORG.

CALIN, 6mo., 10th.

#### Influence of Gardening.

GARDENING is a civilizing and improving occupation in itself, its influences are all beneficial; it usually makes people more industrious, and more amiable. Persuade a careless, indolent man to take an interest in his garden, and his reformation has begun. Let an idle woman honestly watch over her own flower-beds, and she will naturally become more active. There is always work to be done in a garden, some little job to be added to yesterday's task, without which it is incomplete; books may be closed with a mark where one left off; needle-work may be thrown aside and resumed again; a sketch may be left half finished, a piece of music half practised; even attention to household matters may relax in some measure for a while; but regularity and method are constantly required, are absolutely indispensable, to the well-being of a garden. The occupation itself is so engaging, that one commences readily, and the interest increases so naturally, that no great share of perseverance is needed to continue the employment, and thus labor becomes a pleasure, and the dangerous habit of idleness is checked. Of all faults of character, there is not one, perhaps, depending so entirely upon habit as indolence; and nowhere can

one learn a lesson of order and diligence more prettily and more pleasantly than from a flower-garden.

But another common instance of the good effect of gardening may be mentioned: it naturally inclines one to be open-handed. The bountiful returns which are bestowed year after year, upon our feeble labor, shame us into liberality. Among all the misers who have lived on earth, probably few have been gardeners. Some cross-grained churl may set out, perhaps, with a determination to be niggardly with the fruits and flowers of his portion; but gradually his feelings soften, his views change, and before he has housed the fruits of many summers, he sees that these good things are but the free gifts of Providence to himself, and he learns at last that it is a pleasure, as well as a duty, to give. This head of cabbage shall be sent to a poor neighbor; that basket of refreshing fruit is reserved for the sick; he has pretty nosegays for his female friends; he has apples or peaches for little people; nay, perhaps in the course of years he at length achieves the highest act of generosity—he bestows on some friendly rival a portion of his rarest seed, a shoot from his most precious root! Such deeds are done by gardeners.—*Miss Cooper's "Rural Hours."*

#### Glass for Crystal Palace.

THE glass for the New York Crystal Palace is made at Camtown, New Jersey. The managers have contracted for 40,000 feet, one eighth of an inch thick. The glass is to be enamelled by a new process, which saves the necessity of covering the glass with cloth, as was done in the Crystal Palace at London.

The enamel is laid upon the glass in a fluid state with a brush, and after being dried, it is subjected to the intense heat of a kiln, which vitrifies the coating, rendering it fixed and durable as the glass itself. It has an effect similar to that produced by ground glass, being translucent, but not transparent—so that the sun's rays are diffused, and yield an agreeable light to those within the apartment enclosed, without being visible to those on the outside.—*The American Gardener's Chronicle.*





## The Vineyard.

### VINEYARD CALENDAR FOR JULY.

THIS is the month which, with the closing days of June, is ever pregnant with causes of apprehension to the watchful *vigneron*. Supposing that every care has been exercised to dress the soil, prune the vines, and tie them securely, and that due vigilance has been practised to prevent the ravages of the insects which depredate upon the tender shoots and delicate young branches of promising buds and flowers; and further, that a benign Providence has favored the growing crops with the blessings of frequent showers and genial sunshine; everything now will present the brightest promise of abundance, and the avarice of the cultivator may even be tempted to leave too much fruit upon his vines—more than they can safely carry, or perfectly mature. Beware of being too avaricious! all may yet be lost.

*The Rot.*—With the brilliant prospect of luxuriant and healthy growth of wood, and abundant show of the grape bunches, which often gladdens the heart at the opening of July, we may still look for new difficulties. First, and most to be dreaded, is the malady termed *the rot*; the precise nature of which is still enveloped in the mystery of ignorance, having escaped the closest scrutiny that has been brought to bear upon the investigation. We have, however, collected many observa-

tions connected with its appearance, and the immunity from its attacks of certain vines in particular situations; and, alas! we know sorrowfully well its results in casting down to the ground a whole crop, which a week before was full of promise. The atmospheric element most to be dreaded, is continued wet and hot weather about the time the berries are swelling with the hardening of the seeds, or what is technically called the *stoning process*. Hence the vine-dressers desire to see showery and growing weather in May and June, but dry weather in July. Like the wheat-grower, who dreads the "rust," which such weather, just before harvest, brings upon his crops, so the *vigneron* hopes to escape from rains at this time.

*Cultivation.*—It has already been indicated, in previous months, that this process should be pursued during the summer season, rather with a view to keep the surface of the ground clear from weeds and grass, than as a means of stirring the soil deeply. Shallow hoeing from time to time is therefore recommended; which will sufficiently admit the air and warmth to the roots, and also aid materially in the decomposition of manures and other elements of the soil, and better adapt them to the use of the hungry rootlets of the vine. Where horses are used,

the cultivator may be passed through the rows; or, with a light plow, furrows may be thrown toward the plants. All such labor should, however, be avoided in wet weather, especially if the soil be at all stiff and heavy.

*Sprouting and Pinching-in.*—It is hoped that no one has neglected attending to this important element of summer pruning, in its proper season—before the blossoming, for by such neglect the strength of the vine will have been uselessly expended upon many a shoot that must be sacrificed, or, at least, which will have been lost by not having been properly directed. The early shortening of the vines was urged previously. The extreme end of the shoot may be easily removed; and a change in the direction of the flow of sap is at once effected, toward the canes destined for the next year, and the bearing shoots receive abundant supply for their own leaves to elaborate for the fruit. All vine-dressers are not, however, agreed upon this point.

Sufficient caution was perhaps not given, to have the pinching done before the blossoming of the vines. This is by many considered a critical period; and such persons advise that no work be done in the vineyard while it lasts, and especially that the bearing shoots be not shortened-in, as is too often done, close to the bunch. Indeed, we think that two or more leaves should always be left beyond the fruit. There is reason in this caution; if the shoot be vigorous, and have grown a couple of feet, it must have a considerable amount of sap flowing into it, and directed to the leaves above, which is thus suddenly thrown in upon the fruit when the upper portion has been broken off too closely.

If, however, the summer pruning has been neglected to this time, it is recommended by some, to wait until a couple of weeks after the blossoms have set, and then

to attend to thinning the redundant wood, and especially to avoid leaving too much fruit.

*Tying.*—Should never be neglected. Constantly watch the protruding shoots, and secure them to the stakes. During this month the long canes for next year will require to be trained from one stake to another.

In this process the advantage of closer planting in wider rows, say six feet apart, by three in the row, will be apparent. The trellis, particularly that made of stout wire, will also be very convenient in attending to this duty. Its advantages have been already pointed out. The fruit branches will also sometimes require support, as their burden increases in weight; though it is no disadvantage to the bunches to let them lie even upon the ground. The rot is seldom found in fruit so situated; and it has been observed that such are often the earliest ripened bunches.

*Insects.*—And every other depredator and intruder, should be carefully watched, and, if possible, prevented from trespassing among the vines. "No admittance!" be the word.

*Ringing.*—Should now be practiced, by all those who desire to hasten the maturity of a portion of their crop. It is not recommended, however, for general application. This is performed by passing a sharp knife around the last year's wood, so as to cut through the bark in two places half an inch apart; and then by splitting the included portion of the bark, it may be entirely removed with a slight effort, leaving the wood clean. If practised at the time when the cambium is in process of formation, no injury will be done by this operation. A callus of new matter soon closes the gap, and completes the interrupted connection between the roots and the leaves. For the *Isabella*, this is particularly recommended, as a means

of perfecting that variety with greatly enlarged and regularly ripened fruit. This effect is sometimes produced in a natural way, by a strong tendril clasping a vine tightly. In vineyard culture, the Isabella usually sets more bunches of fruit than it can ripen. These should be thinned-out, and not more than ten to fifteen bunches left on the vine, according to its age and vigor.

#### Grapes for Vinery.

THE following kinds are considered, in CHORLTON'S treatise, as the best, and most suitable for the cold grapery, and their time of ripening in New York is given :

Black Hamburg, last week in August ; Victoria Hamburg, last week in August ; Wilmott's Hamburg, first week in September ; Chasselas Fontainebleau, middle of August ; Chasselas Rose, second week in August ; Malvasia, first week in August ; Muscat Blanc Hatif, first week in August ; Purple Damask, last of September ; West's St. Peter's, first week of October ; Zinfandel, middle of August ; Grizzly Frontignan, middle of August ; White Frontignan, middle of August ; Black Frontignan, middle of August ; Decon's Superb, last week in August ; Reine de Nice, first of October ; White Nice, early in October ; Syrian, last week in September ; Xeres, last of August ; Gromier du Cantal, middle of August ; Black Prince, first week in September ; De la Palestine, last week in September ; Dutch Sweetwater, last week in July ; Scharges Henling and Muscat of Alexandria, beginning of September.

#### Grape Borders.

IN looking over this little book, THE COLD GRAPERY, the receipt of which was noticed in a previous number, I was struck with the good sense and sound practical advice respecting the preparation of this fundamental part of a grapery, and extract from it as follows :—ED.

The formation of beds, or more technically borders, in which to grow the grape-

vine, is of great importance ; perhaps more so than any other portion of the whole routine of culture, for without a proper matrix for the roots to luxuriate in, it is impossible to succeed.

The more important is any branch of horticulture, and often the greater the number of opinions respecting it. This is strictly true in the present instance. Some have advocated the admixture of great quantities of raw animal carcasses in such quantities, and large masses, that one would think if their reasoning were true, a recently filled cholera burial-ground would be the best place on which to erect a grapery. Others again have recommended as large doses of blood and the stinking offal of slaughter-houses, in so fresh a state, that the very idea is enough to nauseate the strongest appetite, and forbid the cultivation of this luscious fruit. Fortunately these materials are not required, although when thoroughly decomposed, and well mixed with maiden earth, there is no objection to using a portion well incorporated through the mass. It often happens when thus applied that a very vigorous growth is produced for a time, but sufficient vigor can be had without these stinking nuisances. If used at all, it should be in the form of top-dressings in after years, and forked in, by which the fertility will be assisted, without making the whole bed an unctuous paste, more fit to puddle a duck-pond than for the tender and fleshy rootlets of the grape-vine to luxuriate in. If proof of this were wanted, there are plenty of examples if examined, where the roots have come in contact with these masses of soapy-like substances, that will be found quite rotten ; and if the vines have continued to do well, it is not from the nutriment derived from them, but from their ready adaptability to form fresh spongioles from the back roots, which travel in other directions, and with good treatment added.

If success has seemed to attend the progress in some instances, the failures have been comparatively much greater ; and I am convinced from experience, that more injury than benefit will result from the admixture of animal matter, even in small quantities, in any thing like a fresh state.

Some again make the beds from three to four feet deep of otherwise suitable materials, and neglect sufficient drainage, so that the

whole mass after a time becomes sodden, and impervious to either sun or air, in which no root can exist, much less extend itself: these are some of the many causes why our graperies so soon become weak and unproductive. The natural constitutional powers of the grape-vine are very strong, and of great longevity; it is a gross feeder, and can absorb a large amount of food; but when thus maltreated, although it may bear such usage for a time with much pertinacity, it will eventually become deranged, its physical functions will be weakened, and it either dies of plethora, or wears on an exhausted existence, producing little or nothing but watery leaves and weakly branches.

If such very strong growth were really requisite to produce the finest bunches or berries, and could be obtained by these means, there would be some excuse for thus abusing nature; but such is not the fact, for the finest and best-flavored fruit is had from solid, well-ripened and vigorous, but not over-gorged wood. When the bearing shoots are unduly strong, there are frequently two or more developed from a bud, while with moderate growth only one is formed. Now as each of these buds having received its share of nutriment wherewith to start future development, thus takes from the others a portion, the consequence must be (as only one can remain) a weaker start, and less capability of bursting with the same energy, which would be the case if the bud had only one center. The bunches emanating from such a bud will also contain generally a greater number of florets and shoulders, equal to the concentrated accumulation in the embryo shoot; for it is formed previous to bursting, and before the leaf of the previous season falls, in the axil of which it is fixed.

In all cases of permanent success, the exotic grape-vine luxuriates upon a natural or artificial well-drained bottom. It is a native of warm and comparatively dry climates, and the constitution which nature has fixed, man can not alter. We must then adapt, as near as we can, its position in cultivation to its wants, and if we produce artificially a greater than ordinary amount of growth, we ought to have a corresponding medium whereby to mature that growth. Well-drained borders is one means by which this can be accomplished, as the superabun-

dant moisture is taken away, and the air and the sun's heat can more readily penetrate the soil. If the following directions are followed, there will be no reason to complain of want of success on this point.

Take out to the depth of two feet the whole of the upper surface, then dig a trench two feet wide and one foot deep, with one or more outlets for the water to escape all around the margin of the excavated space, which will form a drain three feet deep from the top, and one foot below the lower base of the borders. Fill this trench with rough stones or brickbats, the rougher the better; afterward fill in over the whole surface about six inches of oyster, or other marine shells, if to be had readily; but if not, broken stones, or pieces of brick will answer; and if a few clean broken bones are at hand, strew them over the surface of the other drainage. Cover this with turf sods, or any rough litter, to prevent the soil falling through and among the drainage. Next fill in with the prepared compost to one foot above the top level; this will give a depth of two feet six inches, which will sink down about six inches, leaving the permanent depth two feet, viz., eighteen inches below, and six inches above, the ground level.

It may be thought that with this amount of drainage, and raised and not deep borders, the soil will become too dry through the summer to maintain vigorous growth. From experience I can testify to the contrary, for although the bottom will not be over wet, the moisture will be equally divided through the whole mass, and if mulched, examination will prove that every part is equally damp. The innumerable small rootlets will be ramifying in every direction, each taking its allotted portion of work, to supply the structure of the plant with wholesome food.

Although it is recommended above to make the whole of the borders at once, which is only one trouble and expense, and will answer very well; yet it is much better to prepare the drainage as advised, and make only half, viz., that part next to the house, of properly prepared compost, filling in the other with the intended base soil a little enriched; and after the first season's growth, work up in the following fall into the half of the unfinished portion, the same quantity of fertilizing materials as the for-

mer half was mixed with. In the spring, before growing commences, this may be again forked over, which will incorporate all more evenly; and the next fall doing the same with the remaining quarter. By this method the borders are kept loose for a longer time, the air is more freely admitted, and the whole becomes more fitted for the healthy progress of the roots, which, as they extend from year to year, will penetrate more readily and fill every portion. The tendency to become solid is much reduced after the borders become filled with roots, as they are always more or less drawing nutriment and moisture, thereby rendering the soil more porous, when the gases of the atmosphere, which are very beneficial, have a chance of occupying the interstices, and forming chemical combinations with the material body, which then becomes suitable food for the support of vegetable life. We have ample proofs of this argument, and where borders are constructed as above advised, there will be an admission of air, not only from the openings to the drains, and from them under the whole bed, but also from above.

It is not by administering such enormous doses of stimulating or fertilizing material all at once, and before the roots have progressed in sufficient numbers or distance to appropriate it to their use, that we are to calculate upon the most permanent results, or immediate success. So long as we supply, from time to time, what is required, it is enough; and if we have got well-drained and porous borders, we can the more readily apply top-dressings and mulchings in after years, without injury, or covering the roots too deep: for in well-drained ground, if a layer of dung be spread over the surface, it will be found after a time that there is little but dry chaff left; all the soluble parts have been washed by the rains down into the soil below, and the plants have received the benefit of it.

The most suitable materials for composing the borders, are a good friable loam, (the top sod, grass included, of a pasture,) with a suitable portion of well-decomposed stable manure, in proportions of one-fourth of the latter to three-fourths of the former, and a good dressing of bones, ground to about an inch in diameter, say one bushel to every cubic yard in bulk. If the soil contains

much lime in its own base, the bones may be dispensed with; but generally they are of much benefit, being a very lasting manure, giving out slowly; and when all the phosphates are exhausted, they still remain as a carbonate of lime, in which the grape-vine delights.

When the base soil where the house is to be erected is of the above nature, it may be used, and the other materials added on the spot, which will save much expense. There is often much useless expenditure caused in this way. Never remove the existing base unless absolutely bad, or unless with little expense a much better substitute can be procured; for with good mixing of the fertilizing matter, and thorough drainage, a poor base can be made good, and often as good as can be required. Imperfect drainage is often the cause of failure that is attributed to an unsuitable constituent base. *The grape-vine is not so capricious in its food as is generally supposed, but a dry bottom it must and will have to prosper.*

#### Joseph Tognò's Lament.

MR. EDITOR: *Dear Sir* — As I see no extracts from the new *Art Journal*, of the governmental metropolis, which has a professor and two engineers, one of whom is a celebrated consul, as its directors or editors; I am forced to apprehend that you do not "exchange" with this new emanation from the press, which is intended to enlighten the people of the United States, upon various matters — and therefore, that yourself and your readers may not remain in the dreadful ignorance, which is threatened by your oversight in this matter, I take the liberty of requesting that you will allow me a brief space to allude to the paper on the *Vine*, by its traveled editor; and also to urge your republication of a letter from Mr. Tognò, of North Carolina, which appeared in the May number, and which furnishes a caption to this communication. It is really a shame that the gentleman at *Dicoteaux* should receive so little encouragement in his patriotic efforts — can it be that our na-

tional and state governments have shown unwonted intelligence in this case, and withhold their support from the peoples' treasury, because they suppose it would be better to employ a *practical vigneron* to conduct vineyard experiments of the greatest consequence, than a *taxidermist*, even with eloquence endowed? Or is it, that the records of our country and its Pomology already show that all the various experiments with foreign grapes, some of them on a large scale, too, have proved failures, while, at the same time, private individuals are everywhere continuing to make trials of the introduction of European varieties — with what success, let them answer.

The papers of the grape editor of the "Polytechnic" appear to be chiefly translations from Babo and other German writers, and are interesting merely as an instance of the very primitive method in which everything is done in some of the old countries of Europe. You know, Mr. Editor, that here, among our vine-clad hills, the more American and unprejudiced, the better the *vigneron*, as a general rule, and that many of our best vine-dressers have never seen nor read of a German or French vineyard; but, instead, have studied the vine as it exists among us. Would that the industrious and indefatigable editor, ex-consul Fleischmann, would spend a summer in our vineyards; then would he know how to select the information we beginners in the back-woods need. But I must come to Mr. Tognio, and allow him to tell his own *lament*, trusting that all kind-hearted readers will sympathize with his dead vines, and the blind and deaf hearers of his offers of instruction.

I do not know what kind of *education* he proposes to conduct in his "school of vines," but it appears from the context that as he has failed to procure even one application for *pupils* of a human nature, he is

now attempting the "*educating*" of that graceless wildling, "the famous *scupper-nong*," and has succeeded so far as to have procured some bunches with more than "five berries," and has "fewer with one or two" than formerly — and hopes to obtain them with "*fewer seed, more crisp, pulp, and thinner skin*" — desiderata, truly!

Yours, truly, VIGNERON.

I HAVE paid a considerable attention to the cultivation of the grape-vine in various parts of this vast country, so far back as 1820. Your views, in many instances, coincide with mine; for instance, the importance of obtaining from abroad all the known varieties, good, bad, or indifferent, to be tried in our country, in order to determine and select those that would best suit the climate of our various localities, in a word, to acclimate, as to mean, maximum, and minimum temperature; quality of soil and its hygroscopicity, as well as the habitual hygrometric condition of the atmosphere, a certain number of European varieties, both for table use and for making wine. In order to accomplish this object, I have obtained, several years ago, at infinite trouble and immense expense, for my limited pecuniary means, a collection of some four hundred varieties, mostly from the southern parts of Europe, being, as I thought, those that would prove best suited to my locality, and those portions of the Union that we call "*Southern and Western States*." In the transit from various countries to this, many varieties were entirely dead before they reached me; still, by taking infinite pains, I succeeded in getting many varieties to take root and do well. It is almost impossible, as yet, for me to say from which of these many causes they have died; and owing to the careless manner of examining the packages at the custom-house, on their arrival, all the varieties were mixed up, so much so, that to this day, I do not know which is which, and shall not, till all fructify.

Fully aware of the many failures that have occurred in the United States for nearly a century past, in the attempt to introduce the European varieties in this country, I determined to give it a trial myself, notwithstanding the discouraging experience of

others, and to point out some of the causes of previous failures.

1st. The general ignorance that exists in this country with respect to the culture of the grape, and the necessary modifications of general principles to suit special localities: and, 2d. The want of appreciation of the value and importance of vineyards in a community so utterly destitute of means of judging, so much so that even when a pioneer vineyardist succeeds very well, at his death his valuable vineyard is neglected, perhaps the cattle are turned into it, and the experience of the individual that has cost him a life-time to acquire, accompanied with continual labor and fatigue and care, are all buried with him. This is nearly the history of every case of the sort that has come to my knowledge.

I have, therefore, four years ago, proposed to the public to begin "*a Model Vine-dresser School*," in this region, for the purpose of educating practically and scientifically, young men in this new and useful branch of agriculture; but, alas! sir, I have never had so much as one application for pupils. I have petitioned three years ago the Legislature of the State of North Carolina, for an appropriation to carry out my plan, by educating in the State, poor but meritorious young men in this new calling, but all in vain. I have been obliged to carry on my trial and experiment all alone, without any kind of assistance; indeed, I have often been the object of ridicule and neglect, precisely because I was undertaking what the nearly universality of persons believe to be "an impossibility long demonstrated," as the late Mr. Downing had settled in his great and useful mind, and my place was pointed at with scorn and derision, and called "Dr. Tognò's FOLLY."

You are right, my dear sir, the Federal Government ought to have "*a model vineyard*," such as you and I have seen at the Luxembourg at Paris; but it ought to be still more useful in its establishment to us, for that French collection was merely meant to classify varieties of known and cultivated vines, and establish the synonyms, which throughout France are very numerous; hence the 2,000 varieties alluded to by you, have dwindled into some 600, according to Count Odart, the author of the best work on this subject of the classifica-

tion of vines, the owner of the largest collection of vines in the world, and whose correspondent I am.

A southern location for a model vineyard is indispensable, at least for that class of grapes with which we expect to make generous and spirituous self-preserving wines.

Should I succeed, as I hope, and even most completely establish the possibility of many varieties being able to accommodate themselves to our climate, there is no certainty that my experience, long and arduous labors, and careful observations, will ever be continued and perpetuated so as to benefit society, and insure or be a stepping-stone to greater improvements and success in the cultivation of the grape for the future.

You richly deserve, sir, the thanks of this vast republic, for your devotion to this great and good cause. Unfortunately as yet, the people are both blind and deaf on this subject, or at least, they turn a deaf ear to it.

Very respectfully,

JOSEPH TOGNO, M. D.

Dicoteaux, near Wilmington, N. C.

P. S. Beside the great attention I bestow on the European vines, I have devoted much time and labor in obtaining seedlings, in grafting the European on our native vines, and in *educating* the famous scuppernong of North Carolina, which so far has been allowed to run wild, without almost any attention at all, except propping it on an arbor. Nature has done a good deal for this vine, and hence it is considered perfect of its kind, and nothing has ever been done to improve it. I regulate its growth with the knife, or in other words, I prune it, a thing that has been considered "*impossible*," because it bleeds profusely if cut at any other season or period but one. That one I have discovered, which enables me to prune it to advantage, and to educate it. It is just after the vine has matured its fruit. The effect of pruning is already evident on my scuppernong grapes. Instead of the tendency of scattering the berries in small bunches, seldom containing more than five berries, there is in mine the tendency to have larger bunches, and seldom bunches with one, or two, or three berries, as is most generally the case with the wild scuppernong. I hope to obtain them with *fewer seeds and more crisp pulp, and thinner skin*.

These being all characters of a higher civilization.  
J. T.

REMARKS:—Messrs. Fleischmann and Togno must not feel themselves aggrieved by the plain speech of our back-woods VIGNERON, which may be distasteful to ears polite, but they may rest assured that no discourtesy is intended, and it is only the honest convictions of the heart, founded upon sad experience, that induces him to speak as he does, in order to warn others from the deceptive delusion of growing foreign grapes, by foreign methods, which have already been tested, and found nugatory, in our different climates, and surrounded, as we are, by native varieties, from which we may produce *seedlings* with a good prospect of improvement, instead of attempting the "*acclimation*" of foreign varieties.—Ed.

#### Missouri Wines for the World's Fair.

A FRIEND at court, who has a nice sense of taste for anything of the sort, has sent, from the Republican of June 3d, a slip announcing the samples selected for exhibition at New York. Ohio may consider this fairly throwing down the glove, and she will not fail to take it up.

Yesterday the committee, assisted by several gentlemen of acknowledged taste and discrimination in the qualities of wines, inspected eleven different varieties of wines, the product and manufacture of this state. The samples submitted were as follows:

From Franklin county:

Catawba wine, vintage of 1852, from L. Gurling.

Do., two samples, one the vintage of 1851, and the other of 1852, from G. S. Bush.

Do., the vintage of 1851, from Theodore Welkins.

Do., vintage not stated, from W. Gullurkamp.

A sample of wine from the Isabella, from Mr. Dalle, the vintage of 1849.

Catawba wine, vintage of 1852, from Julius Gerhevel, of St. Charles county.

Do., the vintage of 1852, from Jacob Rommel, of Herman.

Do., vintage of 1848, from Michael Poeschal, of Herman.

Do., vintage of 1852, from Frederick Fricke, of Herman.

Do., vintage of 1852, from J. H. Beßer, of Boonville, Cooper county.

Sparkling Catawba, vintage of 1850, from William Glasgow, Jr., of St. Louis.

As these wines will undergo the test and judgment of the appropriate committee of the Industrial Fair, we refrain from stating the judgment of the company at present.

#### Vineyards and Wine-Vats.

THE following extracts are from a playfully written book, entitled "*Claret and Olives*"—a fancy title for a fancy book, which has been made up from his side-notes by some body who is said to be a competent agricultural writer, on a tour of observation in parts of Europe. Judging from the notes he has furnished in this popular work, the more serious report may be looked for with interest, as promising to furnish us with a capital account of the land interests of southern Europe. The selections here presented were supposed to be acceptable to those among us who are engaged in the culture of the vine:—Ed.

"Fancy open and unfenced expanses of stunted-looking, scrubby bushes, seldom rising two feet above the surface, planted in rows upon the summit of deep furrow ridges, and fastened with great care to low, fence-like lines of espaliers, which run in unbroken ranks from one end of the huge fields to the other. These espaliers, or laths, are cuttings of the walnut trees around, and the tendrils of the vine are attached to the horizontally running stakes with withes, or thongs of bark. It is curious to observe the vigilant pains and attention with which every twig has been supported without being strained, and how things are arranged so as to give every cluster as fair a chance as possible of a goodly allowance of sun. Such, then, is the general appearance of matters; but it is by no means perfectly uniform. Now and then you find a patch of vines unsupported,



drooping, and straggling, and sprawling, and intertwisting their branches like beds of snakes; and again you come into the district of a new species of bush, a thicker, stouter affair, a grenadier vine, growing to at least six feet, and supported by a corresponding stake. But the low, two-foot dwarfs are invariably the great wine-givers. If ever you want to see a homely, not read, but grown by nature, against trusting to appearances, go to Medoc and study the vines. Walk, and gaze, until you come to the most shabby, stunted, weazened, scrubby, dwarfish, expanse of snobbish bushes, ignominiously bound neck and crop to the espaliers, like a man on the rack—these utterly poor, starved, and meager-looking growths, allowing, as they do, the gravelly soil to show in bald patches of gray shingle through the straggling branches—these contemptible-looking shrubs, like paralyzed and withered raspberries—they are which produce the most priceless, and the most inimitably flavored wines. Such are the vines which grow Chateau Margeaux at half a sovereign the bottle. The grapes themselves are equally unpromising. If you saw a bunch in Covent Garden, you would turn from them with the notion that the fruiterer was trying to do his customer with over-ripe black currants. Lance's soul would take no joy in them, and no sculptor in his senses would place such meager bunches in the hands and over the open mouths of his Nymphs, his Bacchantes, or his Fauns. Take heed, then, by the lesson, and beware of judging of the nature of either men or grapes by their looks." pp. 31, 32.

"The wine-press, or *cuvier de pressoir*, consists, in the majority of cases, of a massive shallow tub, varying in size from four square feet to as many square yards. It is placed either upon wooden trestles or on a regularly built platform of mason-work under the huge rafters of a substantial out-house. Close to it stands a range of great butts, their number more or less, according to the size of the vineyard. The grapes are flung by tub and caskful into the *cuvier*. The treaders stamp diligently amid the masses, and the expressed juice pours plentifully out of a hole, level with the bottom of the trough, into a sieve of iron or wicker-work, which stops the passage of the skins, and from thence drains into tubs below.

Suppose, at the moment of our arrival, the *cuvier* for a brief space empty. The treaders—big, perspiring men, in shirts and tucked-up trousers—spattered to the eyes with splashes of purple juice, lean upon their wooden spades, and wipe their foreheads. But their respite is short. The creak of another cart-load of tubs is heard, and immediately the wagon is backed up to the broad, open window, or rather hole in the wall, above the trough. A minute suffices to wrench out tub after tub, and to tilt their already half-mashed clusters splash into the reeking *pressoir*. Then to work again. Jumping with a sort of spiteful eagerness into the mountains of yielding, quivering fruit, the treaders sink almost to the knees, stamping and jumping and rioting in the masses of grapes, as fountains of juice spirt about their feet, and rush, bubbling and gurgling, away. Presently, having, as it were, drawn the first sweet blood of the new cargo, the eager tramping subsides into a sort of quiet, measured dance, which the treaders continue, while, with their wooden spades, they turn the pulpy remnants of the fruit hither and thither, so as to expose the half-squeezed berries in every possible way to the muscular action of the incessantly moving feet. All this time, the juice is flowing in a continuous stream into the tubs beneath. When the jet begins to slacken, the heap is well tumbled with the wooden spades, and, as though a new force had been applied, the juice-jet immediately breaks out afresh. It takes, perhaps, half or three-quarters of an hour thoroughly to squeeze the contents of a good-sized *cuvier*, sufficiently manned. When at length, however, no further exertion appears to be attended with corresponding results, the tubsful of expressed juice are carried, by means of ladders, to the edges of the vats, and their contents tilted in; while the men in the trough, setting to with their spades, fling the masses of dripping grape-skins in along with the juice. The vats sufficiently full, the fermentation is allowed to commence. In the great cellars in which the juice is stored, the listener at the door—he can not brave the carbonic acid gas to enter further—may hear, solemnly echoing in the cool shade of the great darkened hall, the bubblings and seethings of the working liquid—the inarticulate accents and indistinct

inct rumblings which proclaim that a great metempsychosis is taking place—that a natural substance is rising higher in the eternal scale of things, and that the contents of these great giants of vats are becoming changed from floods of mere mawkish, sweetish fluid to noble wine—to a liquid honored and esteemed in all ages—to a medicine exercising a strange and potent effect upon body and soul—great for good and evil. Is there not something fanciful and poetic in the notion of this change taking place mysteriously in the darkness, when all the doors are locked and barred—for the atmosphere about the vats is death—as if Nature would suffer no idle prying into her mystic operations, and as if the grand transmutation and projection from juice to wine had in it something of a secret, and solemn, and awful nature—fenced round, as it were, and protected from vulgar curiosity by the invisible halo of stifling gas? I saw the vats in the Cateau Margaux cellars the day after the grape-juice had been flung in. Fermentation had not as yet properly commenced, so access to the place was possible; still, however, there was a strong vinous smell loading the atmosphere, sharp and subtle in its influence on the nostrils; while, putting my ear, on the recommendation of my conductor, to the vats, I heard, deep down, perhaps eight feet down in the juice, a seething, gushing sound, as if currents and eddies were beginning to flow, in obedience to the influence of the working Spirit, and now and then a hiss and a low bubbling throb, as though of a pot about to boil. Within twenty-four hours, the cellar would be unapproachable.” pp. 43–45.

#### Analysis of the Grape.

BERTHIER (in the annals of Ch. & Phys.) has examined the ashes of the vine and its organs with respect to the culture. Berthier gives the analyses of the ashes of the different portions of the *Chasselas* and *Pineau*. The bunches were stripped of their berries, the stalks weighed, the berries squeezed, pressed out into a cloth, the residuum also weighed, the juice filtered, and each part dried by itself, and reduced to ashes. Of 1000 parts by weight, the following result was obtained:

WHITE CHASSÉLAS.	
Stalks.....	42 parts with 0.6 ashes.
Skins.....	220 parts with 1.1 ashes.
Juice.....	738 parts with 1.9 ashes.
Total.....	3.6 ashes.

PINEAU.	
Stalks.....	36 parts with 0.6 ashes.
Skins.....	240 parts with 1.1 ashes.
Juice.....	724 parts with 3.0 ashes.
Total.....	4.7 ashes.

The particular analysis of these ashes gave, for 100,000 parts.

WHITE CHASSÉLAS.				
	Stalks	Skins	Juice	Whole Grape.
Alkaline salts.....	20	60	100	180
Carbonate of lime.....	26	12	35	73
Carbonate of magnesia.....	..	8	12	20
Phosphate of lime.....	14	30	47	91
	60	110	194	364

PINEAU.				
	Stalks	Skins	Juice	Whole Grape.
Alkaline salts.....	20	60	154	234
Carbonate of lime.....	26	20	72	118
Carbonate of magnesia.....	..	8	12	20
Phosphate of lime.....	14	30	72	116
	60	160	298	468

He concludes that the soluble parts, i. e. the alkaline salts of wood and leaf, are four times as great, and that the ashes in the whole are nine times as great as those of the fruit; whence Berthier concludes that it is neither the wine nor the grapes, but the wood and the leaves, that make the great demand for alkali for grape culture.—*Polytechnic Journal*.

**CORRECTION.**—An article appeared in the *Gazette* yesterday, taken from the *United States Economist*, which seems calculated to convey a wrong impression in regard to the production of Wine in the neighborhood of Cincinnati. It was stated that Mr. Longworth was compelled, per order, to procure a necessary supply for his yearly increasing Champagne Manufactory, to send to Wisconsin to get wine, a country and climate that never has and never can produce a gal-

lon of wine even of moderate quality. We believe the error grew out of the fact that Mr. Longworth sent to Missouri, and purchased several thousand gallons from the German settlement, made at Hermann, where the culture of the grape and production of wine have been successfully introduced.

DR. MOSHER.

[*Cincinnati Gazette*, June 1st.]

#### Raisins.

EVERY BODY is fond of raisins, especially if they are of the finest quality, but everybody we suspect does not know that they are successfully prepared in this state, and we be-

lieve also in other parts of this country. The Horticulturist says:

"DOMESTIC RAISINS.—We have just received a box of nice raisins, prepared from the Isabella grape, by Mr. E. A. McKay, of Naples, Ontario county, who has one of the most complete little vineyards in western New York. We have passed these raisins around among our friends, and they have invariably been pronounced *excellent*, some preferring them to the imported article. Mr. McKay informs us that they keep well, and they certainly appear as though they would. Why may not this become an important branch of fruit culture? A very large amount of money is annually sent abroad for raisins. The matter demands attention."

## Transactions.

### THE CINCINNATI HORTICULTURAL SOCIETY.

THE Spring Exhibition of this Association opened at Masonic Hall on Wednesday, June 1st. The display of fruits and flowers was highly creditable, though the collections were not so extensive as upon some previous occasions. The characteristic of the occasion was the remarkable care with which the plants had been grown and the admirable result in the perfectly formed specimens, literally covered with bloom, covering the foliage which in turn concealed the pots.

It would be invidious to draw any comparisons, but it must be noted, that every visitor was struck with the display of fine plants made by John Sayers, of Cottage Garden. His Geraniums, Verbenas and Petunias were admirable specimens of the gardenesque. The collection of Pines and other rare trees from Beck and Tœpfert was a show not often seen here. The *Erythrina* herbacea, from M. Heighway was much admired for its scarlet flowers. Joseph Dunlap's plants, Frederick Neimaier's, William Heaver's, and those of other contributors,

were very creditable and praiseworthy. Specimens deserve a more extended notice, but the reader is referred to the Reports of Committees.

Strawberries were shown in great perfection, and our own seedlings sustain themselves in public favor, as will appear below. Cherries were scarce, but those shown were fine. The display of forced grapes, from William Heaver, was a point of great attractiveness. With these brief introductory remarks the reader is referred to the record of entries, and to reports, for further information.

#### POT PLANTS.

WM. HEAVER: For the best six *Polargoniums*: Mary of Burgundy, Constellation, Queen of Scots, Anais, Tom Thumb, Lucia Rosea. For the best twenty plants: *Catharanthus rosea*, and *alba*, *Salvia amabilis*, 10 *Gloxinias* Princess Lamballe, Professor Desi um, Contornii, Scotti, Napoleon, Queen Victoria; 2 *Hibiscus sinensis* jaune, *Tabernaemontana* fl. pl., 2 *Plumbago capensis*, *Gardenia florida*, *Bouvardia leucanthe*, 2 *Begonia parvifolia*, *Hydrangea hortensis*, 2

Angelona Gardneri, Ruellia formosa, Leschenaultia formosa; 6 Fuchsias, Expansion Clapton Hero, Nonpareil, Elise Meillez, Nympe, Diadem of Flora. *Miscellaneous*: 2 Alstroemeria pelegrina, Tom Thumb, Fuchsia Alboni, Linum, Coffea, 3 Angelona, Spirea japonica, 6 Lucia Rosea, 3 Lantanas, Calestegia pubescens, 2 Eriobotrya japonica, Ficus elasticus, 2 Ampelopsis tricolor, Clarkia elegans, Pine-apple geranium. *Conifers*: Juniperus excelsa, Abies morinda, Pinus pindarum, 2 Araucaria imbricata, Cedrus Deodara, Taxus adpressus, Cryptomeria jap.

**TORREY AND BACK**: Phyllocladus trichomanoides, Pinus Abies nana, Pinus Abies morinda, Pinus Abies Menziesii, Pinus Picea religiosa, Pinus Picea Nordmanniana, Pinus Picea spectabilis (Webbiana,) Pinus Strobilus ayacahuite, Pinus Strobilus patula, Pinus Strobilus excelsa, Cunninghamia sinensis (Pinus lanceolata,) Taxus Baccatus fol. aur. var., Taxus adpressus tarivus, Euonymus fimbriatus, Juniperus intermedia, Juniperus thurifera, Juniperus oxid. daarica, Juniperus excelsa, Thuya filiformis, Mahonia ternifolia, Cryptomeria japonica, Podocarpus spicatus, Prunus reflexus sinensis, Quercus pedunculata cuculata, Genista Bouleynana, Ilex japonica latifolia, Ilex angustifolia aur. var., Ilex crassifolia, Ilex calamistrata, Ilex caroliniana, Ilex balearica.

**THOS. KNOTT**: Hibiscus sinensis, Clematis Sieboldii, Hydrangea, Clerodendron fragrans, 4 Pelargoniums, 2 Gen. Tom Thumb, 4 Fuchsias, 9 Roses, Verbenas.

**JOHN SAYERS**.—Verbenas: Gen. Scott, Orb of Day, Henry Clay, Mount Etna, St. Marguerite, Defiance, White Cluster, Magnificent, Striped Eclipse, Nectar Cup, White Perfection, May Morn, Republic, Defiance, Superb, Gen. Scott; Polygala dalnapiana Alstroemeria pelegrina, 2 Plumbago capensis, Torrenia asiatica, 2 Hibiscus sinensis rubra, Pyrethrum nov. dble. white, Catharanthus rosea, Hydrangea hortensis, Lantana mutabilis, Lantana major, Ficus elasticus, Russelia juncea, Calceolaria angustifolia, Cuphea platycentra, Cryptomeria japonica, Carrie's new white Azalia, Begonia fuchsoides, Begonia hydrocotylifolia, 2 Begonia parvifolia, 6 Antirrhinums; Pelargoniums, Defiance, 2 Gen. Tom Thumb, Tom Thumb's General, Lucia Rosea, Cottage Maid, Juliette. Petunias: Enehantress, Rosea (seedling of '52,) Uncle Ned, do., Fairy, do., Diadem, do.,

Hero, do., Gem, do., Dan Tucker, do., 2 Pr. of Wales, Heavenii, Sun Dial; Scarlet Valerian, Nierembergia gracilis, Nierembergia, filicaulis Euphorbia splendens, Euphorbia Brionii, Cuphea strigulosa, Begonia maculata, Gardenia radicans, Habrothamnus elegans, Alstroemeria pelegrina, Ardisia crenulata, Calceolaria maculata.

**JOSEPH DUNLAP, gardener to P. Outcult, of Scarlet Oaks**.—Eighteen Fuchsias, Pearl of England, Fair Rosamond, One in a Ring, Commodore Pomp, Beauty of Leeds, Expansion, Exquisite, Caroline, Elizabeth; 6 Scarlet Geraniums, Tom Thumb, Princess Royal, Lucia Rosea, Defiance, Cottage Maid; 4 Pyrethrums Lobelia racemosa, Hydrangea hortensis, Begonia hydrocotylifolia, 6 Nutmeg geraniums, Pelargonium Queen of the West, Sultana, Cuphea platycentra and strigulosa, 2 Calceolaria, angustifolia, Oxalis rosea, Lychnis chalcidonica, Ardisia crenulata, Justicia carnea, Mysembryanthemum grandiflorum.

**FRANCIS PENTLAND, gardener to N. Longworth**.—12 Scarlet geraniums, 14 Fuchsias, One in the Ring, Pearl of England, Fair Rosamond, Elizabeth, Commodore Ponce, Caroline, Hebe, etc.; 3 Pyrethrums, 2 Cuphea platycentra, Solanum jasminoides, Salvia splendens major, and other plants.

**FREDERICK NEIMAIER, gardener to Jacob Hoffner, Esq.**—Amaryllis Jacobea, Achimenes longiflora, Achimenes rosea, Achimenes picta, Begonia hydrocotylifolia, Begonia parvifolia, Begonia manicata, Caladium esculentum, Crinum longifolium, Cuphea platycentra, Cereus speciosissimus, Euphorbia speciosa, Euphorbia Bryonii, Gloxinia speciosa, Heliotropium Voltairianum, Heliotropium peruvianum, Lobelia gracilis, Leschenaultia formosa, Lantana mutabilis, Lilium longiflorum, Maurandia Barclayana, Maurandia Barclayana alba, Ruellia speciosa, Sollya heterophylla, Senecio elegans, Torrenia asiatica, Catharanthus albus, Catharanthus rosea, Tabernamontana coronaria, 6 lots of Pelargonium, 3 Shrubby Calceolaria, 10 Herbaceous Calceolaria.

**KELLY & Co.**—Hydrangia radiata, (new.)

**M. HEIGHWAY**.—Erythrina herbacea.

**EDMUND CRAIG**.—A collection of plants.

#### CUT FLOWERS AND BOUQUETS.

**JOSEPH DUNLAP**.—Roses: Baronne Prevost, Prince Albert, La Reine, Mrs. Elliott,

Louis Napoleon, Earl Talbot, Edw. Jesse, Jacques Lafitte, Yolande, d'Arragon, Marshal Soult. Also noble specimens of *Frasera* Walteri in bloom.

**JAMES HOWARTH.**—Two baskets of cut flowers consisting of roses: Prince Albert, Laffay, La Reine, Marshal Soult, Rivers, George Fourth, Mrs. Elliott, Geant des batailles, Souvenir d'Anselmo, Agrippina, Baronne Prevost, Moss, White, Adelaide, and Red; Ayrshires in varieties; Noisettes in varieties; Bouquet Blanc, Watt's Celestial, La Tourterelle; Phloxes in variety, Foxgloves, Peonies, and Pinks.

**DR. SHALEB.**—A basket containing roses: Persian Yellow, Mrs. Elliott, Souvenir de Malmaison, Bosanquet, Aubernon; *Deutzia scabra*, and Peonies in variety.

**MICHAEL RICE,** *Gardener to N. Longworth.* Basket of choice roses.

**G. SLEATH.**—Baskets of cut flowers.

**FROM KELLY, EVANS, & Co.**—Antigone, Adele Mauzee, Augustine Mouchelet, Baronne Prevost, Bouton de Flore, Comte de Paris, Dr. Marx, Duchesse de Nemours, Duchesse de Rohan, Duchess of Sutherland, Duc d'Isly, Duc d'Aumale, Eugene Sue, Emma Dampiere, Edward Jesse, Fulgorie, Jacques Lafitte, Joasine Hanet, Julie de Krudner, La Bedoyere, La Reine, Lindley, Louis Bonaparte, Madame Dameme, Madame Laffay, Madame Trudeauux, Marechal Soult, Marquesa Boccella, Mrs. Elliot, Mogador, Prince de Galles, Prince Albert, Princesse Clementine, Rivers, Reine du Matin, Reine des Fleurs, Yolande d'Arragon. Also a collection of *Rubifolia* climbing and Hybrid China roses.

**WM. HEAVER.**—*Hybrid Perpetual Roses.*—Coronet, Compt de Paris, Augustine Mouchelet, Countess Duchatel, Maria Leksinska, Geant de Batailles, Emma Dampier, Compt Montalivet, Madame Trudeauux, Mrs. Cripps, Prince Albert, Rivers, Marquis Bocella, Melanie Cornu, Yoland d'Arragon, Clementine seringe, Clementine Duval, Asteroide, Olivier des Serres, La Gracious, Reine de Fleurs, Lady Alice Peel, Aricea, Madam Prevost, Lane, Wm. Jesse, Baron Prevost, Mrs. Elliott, Earl Talbot, Madam Laffay, Lilacee, Baron Halex, Marshal Soult, Duchess d'Montpensier, Jacques Lafitte, Louis Bonaparte Rosalba.

**Moss.**—Princess Adelaide, Old Red,

Prolifere, Luxembourg, Alice Leroy, White, Unique, Countess Murinais, Clifton, Crested.

**Yellow.**—Persian.

**Multi flora.**—Superba, Baltimore Belle, Ayrshire Queen, Laura Davoust, Scarlet Greville.

**Bourbon.**—Acidalie, Hermosa, Hersilie, Emilie Courtier, Mrs. Bosanquet, Souvenir De la Malmaison, Augustine Lelieur.

**Bengal and Tea Noisettes.**—Queen of Lombardy, Roi de Cramoisie, Green, Fleur de Jaune, Grandiflora, Peonies, Humelii, Whittlejii, fragrans, lutea; Iris yellow and white, Spireas, sinensis, japonica, filipendula and arunca, *Eringium maritimum*, *Deutzia scabra*, *Delphiniums elatior*, *exaltatum* and *sinensis*; *Baptisia coerulua*.

**Hybrid China.**—Madame Plantier, La Indienne, Princess Helena, Celestial, Princess Augusta, George the Fourth, Bon Ginneure.

#### Bouquets.

For the display: two nine inch, a large collection of five inch.

**R. M. BARTLETT.**—Pyramidal bouquet, 1½ feet in high, composed of double Peonies, and white Ayrshire roses. A large branch of La Reine full of flowers.

**A. H. ERNST.**—Three baskets—varieties.

**P. S. BUSH.**—One basket—varieties.

**GEORGE GRAHAM.**—One basket of cut flowers, principally roses.

**S. M. CARTER,** Beech Grove, Campbell co., Ky.—roses: *Hybrid Perpetual*, Madame Laffay, Prince Albert, Baronne Prevost, "Napoleon Triumphant," La Reine, Marquise Boccella, Louis Napoleon, Emma Dampiere. *Bourbon*: Paul Joseph, Hermosa. *Hybrid China* and others; George Fourth, Anisette, Old White, Harrisonii Velvet and others. Phlox Van Houtelii, Pinks, and other flowers, beautifully arranged with moss and beech leaves, among the 22 beautiful bouquets.

**W. COX, JR.**—A show stand of 24 varieties of *Dianthus barbatus*.

**REES E. PRICE.**—Marguerite d'Anjou, Aubernon, Rivers, Duchess of Sutherland, Napoleon Triumphant, Marquis d'Ailsa, La Reine, Baronne Prevost, Geant des Batailles, Duc d'Aumale, Lydia, Stanwell's Perpetual, Prince Albert, Emma Dampiere, Dr. Lindley, Yoland d'Arragon, Madame Laffay, Lane, Madame Trudeauux, Lamar-

que, Hermosa, Paul Joseph, Cels Tea, Bon Ginneure, Variegata, Madame Plantier, Auritii, Russel's Cottage, Rivers' George Fourth, Princess Helene, Perigot, Laura Davoust, Baltimore Belle. Crested Provins moss, Red moss, Clifton moss.

MRS. BELLE REILLY.—Basket of assorted flowers.

MRS. W. G. W. GANO, ditto.

H. HATHAWAY, Carrollton, Ky.—A rich floral ornament and some handsome bouquets.

T. V. PETICOLAS.—Roses: *Hybrid Perpetual*, Madame Laffay, Fulgorie, Prince Albert, La Reine. *Hybrid China*, George Fourth, Tourterelle, Madame Plantier, Yellow Harrison, White Moss, Old White, Imperial Cabbage, Hermosa, Louis Philippe, Scotch Briar, Sanguinia, Daily, Belle de Monza, etc.

D. McAVOY.—White Paeonies, Deutzia, Russel's cottage, large basket of strawberries.

JOHN SAYERS.—One basket.

M. McWILLIAMS.—Roses: *Hybrid Perpetual*, Prince Albert, Madame Laffay. *Hybrid China*, George Fourth, Turterelle, Saint Brennus, Saint Genevieve, Old White, Centifolias, Old Red Moss, Laura Davoust, Mrs. Bosanquet, Verbenas and other flowers.

MRS. BUCHANAN.—A large basket, embracing a variety of roses.

THE MISSES ORANGE.—Ditto, and assortment of roses and bouquets.

DR. MOSHER.—Basket of five bouquets.

#### FRUITS.

MR. BUCHANAN.—Cherries: Early May, Mottled Bigarreau, Black Heart, Black Eagle, Elton, May Duke, Harrison Heart, Holman's Duke, Downer's Late Red, Hyde's Seedling, Belle de Choisy. Apples: Virginia Greening, Newtown Pippin, French Everlasting, Harrison, and a new seedling. Seven varieties of plums, and two of apricots, to show the productiveness of the trees, and freedom from sting by the Curculio.

P. BUSH.—Early Richmond and Black Tartarian Cherries.

M. McWILLIAMS.—Cherries: Elton, Yellow Spanish, May Duke, Early May, Napoleon and Honey Cherry.

JOE. DUNLAP.—Strawberries: McAvoy's Superior, Schneicke's Pistillate, Jenny's Seedling, Burr's New Pine, Hovey, Willey's Seedling, Hudson, Neck Pine.

JAMES HOWARTH.—McAvoy's Superior, from plants set out last fall.

T. V. PETICOLAS.—Strawberries: Longworth's Prolific, Jenny's, Hudson, Peticolas' Seedling, Neck Pine, Hovey, Crimson Cone, McAvoy's Superior and Bane's Extra Early. Cherries: Early Richmond and May Duke Apples, Lansinburg.

WILLIAM ORANGE.—McAvoy's Superior and La Grange Strawberries. Cherries: Early Richmond.

W. E. MEARS.—Strawberries, fifteen varieties; McAvoy's Superior, Longworth's Prolific, Prolific Hanton, Black Prince, Bishop's Orange, Monroe Scarlet, Red Alpine, White do., Scarlet Indian, Hovey's, Boston Pine, Washington, Crimson Cone, Seedling Alpine, Large Early Scarlet. Cherries: Early Richmond and unknown.

MRS. LOUDERBACK.—A fine dish of McAvoy's superior Strawberry, grown by Mr. Levassor.

S. M. CARTER.—Amelanchier. Strawberries: Carter's No. 1, Burr's Mammoth, Black Prince, Hovey, Hudson and another variety. Cherries: Yellow Spanish and another. Gymnocladus.

MRS. S. RINTZ.—Cherries: Black Tartarian and May Duke. Strawberries: McAvoy's Superior, four plates.

WILLIAM HEAVER.—Forced grapes: Black Hamburg, Black Prince, White Frontignan, Grizzly Frontignan, Royal Muscadine, & Charles Henling; and May Duke cherries.

#### REPORT OF THE FLOWER COMMITTEE.

##### To the President and Members:

GENTLEMEN:—Your spring exhibition which was held on Wednesday, Thursday and Friday, June 1st, 2d and 3d, in the beauty of the plants and flowers displayed, surpassed all spring exhibitions of your society, that have preceded it. The specimens exhibited were most luxuriant and beautiful; rich in color. How well then does this speak for our nurserymen and gardeners, with amateurs also, if we may be allowed so to term them. A general taste for a pursuit so rational, humanising and elegant, is spreading. The show, generally, was more remarkable for well selected varieties than for quantity, especially in the department assigned us. The leading features in this department, were the splendid collection of Petunias of Mr. John

Sayers, of Cottage Garden, named *Roses*, *Diadem*, *Gem*, *Hero*, *Fairy*, *Uncle Ned* and *Prince of Wales*; some of which are his seedlings. He also exhibited three new Seedling *Verbenas* of great merit, named *Henry Clay*, *White Cluster* and *Mount Aetna*. The collection of new and rare plants of Töpfert & Beck, and the collections of *Remontant Roses* of Kelly, Evans & Co., deserves honorable mention by your committee. The collection of ornamental bouquets of Mrs. Heaver, were arranged with exceeding good taste. It would indeed be no easy task either to overstate the merits, or to picture too highly the beauty of any part of the exhibition. There were not half a dozen plants in the room which, little more than as many years ago, would not have been admired in this city as objects of extraordinary merit, and we hope we shall not be charged with exaggeration, and with a too highly colored description of the general appearance of the exhibition. We think we can have no apprehension on that point, from any one who was present, and to those who were absent, we say they missed a great feast of *Flora*. We only wish to draw attention to this matter as a triumph of horticultural skill, which a few years ago, would have been viewed as an improbability. If we look back to what our exhibitions were a few years ago, and if it also be remembered what were the plants, and what was the condition of them when exhibited, we must be pleased and delighted. We need only ask any impartial judge, who on last Wednesday, may have walked through *Masonic Hall*, taking an impartial survey of the whole, what floriculture is destined to be twenty years hence, if it progresses with such rapid strides?

And here we are reminded of the very opposite opinions which some persons entertain with regard to the good or the evil which these exhibitions are supposed to effect. Some view them with indifference, as tending to no important end; others prefer various grave charges against them. Horticultural Societies, like all other institutions, have their defects, and under the best management can not be said to be other than a mixture of good with some evil. That the good does however, preponderate, is admitted and proved by the ample experience of the past; their exhibitions have

excited a wholesome and laudable emulation among horticulturists, and have thereby stimulated many to perseverance, and to a greater amount of diligence and attention in the production of superior fruits, flowers and vegetables. It is a fact evident to all that Horticultural Exhibitions have done, for gardeners and gardening, what agricultural exhibitions have done for farmers and farming. These public displays of the sister arts tend to the public good, by improving the modes of culture in both, and so long will they continue to do good in this way, the superior plants, flowers, fruits and vegetables, which are now brought to our exhibitions, and to our markets will continue to improve.

Let it not be supposed that we imply that none but those who display their productions at exhibitions are successful and clever as gardeners; perhaps better productions, certainly as good, have been reared and "bound to blush and die unseen," by the public. We wish only to maintain that those who patronise exhibitions and are successful in public competition, give us obvious evidence of their superior skill and practical knowledge. It is an established fact, proved by the history and experience of individuals and institutions, that if a superior attainment has to be effected, the excitement of some public occasion must be appealed to in order to its accomplishment. Public exhibitions therefore, present this excitement to gardeners, nurserymen and amateurs, who become competitors on these occasions. While these exhibitions exist, gardening will progress; these are the main-spring by which the whole horticultural machine is kept in motion.

Before concluding this report, we can not leave the subject without expressly, and as explicitly as possible, drawing the attention of the members generally of this society, to what we conceive to be an error in the manner in which your committees' duties are performed, and hope we shall be excused for taking this liberty, as the best interests of the society prompt us. Their duties are to decide upon the merits of the several contributions for competition—to weigh impartially the various conflicting claims, and to decide accordingly.

Their duties ought to be clearly and explicitly stated to them, and every article

placed in the room for competition, without any private marks or labels, by which the judges may know whose articles are exhibited (until they have made their decisions.) This should all be done, and the room arranged before any member of the committees (or judges) be allowed to enter, when they should be introduced by the President, and the doors locked and kept so, until they have made their decisions.

The judging of plants is often fraught with much disaffection, which may excite in us no surprise when it is considered how loosely the judges duties are defined, when in offering awards for "the best twenty green-house plants" for example, too much discretionary power is vested in the judges, who are left to indulge in individual opinion. Can it be expected to obtain generally, a satisfactory decision under such circumstances? To one class of judges the plant of recent introduction is superior to all others, and the award is so decided. Another decides on the best grown specimens as possessing more merit, and a third insists that they should all be judged by comparative value in dollars and cents. And then the competitors, when examining such decisions, conceive they have an equal right to exercise their opinions, and are dissatisfied. And we have one stating that although his plants were older, they were superior in cultivation to "small new things."

By clearly defining the duties of judges, we might prevent the necessity of appointing additional committees to revise the awards, which caused dissatisfaction.

If we speak strongly on this matter, it is because we have learned from experience, and distinctly remember some of the evils to which we refer. In getting up the premium list next year, this evil may be much mitigated by grouping the plants, distinguishing where awards are offered for new or rare kinds, and where they are offered for plants of superior cultivation. This would simplify the work of the judges, and their decisions in such cases would be better understood both by the competitors and visitors. We respectfully request of you to pass a by-law to take effect at our next Autumn exhibition, excluding the judges from the rooms until all is arranged, etc.

We now respectfully present you with our list of AWARDS:

- 3 best double Sweet-Williams, Wm. Cox, Jr., Diploma.  
 12 best Verbenas, in pots, John Sayers, Western Horticultural Review.  
 6 best Petunias, in pots, John Sayers, \$2 00  
 6 second best Petunias, in pots, John Sayers, . . . 1 00  
 6 best Bourbon Roses, in pots, Thomas Knott, . . . 2 00  
 12 best Remontants, cut flowers, Wm. Heaver, . . . 2 00  
 12 second best Remontants, cut flowers, Reese B. Price, Diploma.  
 6 best Fuchsias, in pots, J. Dunlap, gardener to Peter Outcalt, Esq., . . 3 00  
 6 second best Fuchsias, in pots, Pentland, gardener to N. Longworth, Esq., 2 00  
 3 best Fuchsias, in pots, J. Dunlap, 2 00  
 3 second best Fuchsias, in pots, J. Dunlap, . . . Diploma.  
 Best specimen Fuchsia, F. Pentland, 1 00  
 10 best Herbaceous Calceolarias, F. Neimaier, gardener to J. Hoffner, Esq., Review.  
 Best display of Pelargoniums, F. Neimaier, . . . 5 00  
 Second best Pelargoniums, Wm. Heaver, . . . 3 00  
 12 best Scarlet Geraniums, Francis Pentland, . . . 4 00  
 6 best Scarlet Geraniums, J. Sayers, Diploma.  
 3 best Scarlet Geraniums, J. Dunlap, . . . 3 00  
 Best display of hardy Annual Roses, Wm. Heaver, . . . 3 00  
 Second best display of hardy Annual Roses, Reese B. Price, . . . 2 00  
 Best Tree Peonies, A. H. Ernst, . . . 1 00  
 Best collection of 20 Stove and Green-house Plants in flower, John Sayers, . 15 00  
 Second best collection of 20 Stove and Green-house Plants in flower, F. Neimaier, . . . 7 00  
 Best Specimen Plant, John Sayers, . 1 00  
 12 best Stove and Green-house Plants, Wm. Heaver, . . . 6 00  
 12 best Stove, etc., J. Dunlap, . . . Review.  
 6 best varieties, T. Knott, . . . 3 00  
 6 second best, F. Pentland, . . . 2 00

#### BOUQUETS.

- Best pair of Hand Bouquets, T. Knott, 2 00  
 Second " " " W. Heaver, 1 00  
 Best pair of 9 inch " " 2 00



Best display of all kinds, " 4 00  
Second best " S. Carter, 2 00

## GRATUITIES.

To the Misses Orange, for a splendid collection of Roses and Bouquets, . \$2 00  
To S. S. Carter, for a collection of Roses, . 1 00  
To Miss E. McAvoy, for a fine Bouquet, 1 00

## EXTRA PRIZES.

To Wm. Heaver, for a fine Plant of *Hydrangia Hortensis*, . \$1 00  
To Messrs. Topfert & Beck, of Locust Grove, for a collection of new and rare Coniferous Plants, never before exhibited to this Society, . 7 00

Messrs. Kelly, Evans & Co., exhibited three stands, containing upwards of seventy varieties of Remontant Roses, not placed for competition.

RICH'D DAVIES, Chm'n.,  
ROBERT ROSS,  
WM. COX, Sen.

Your committee, in the hurry of the first day's proceedings overlooked a fine collection of Roses and Bouquets, exhibited by M. McWilliams, to which we desire to award an extra prize of . \$2 00.

Also, to Mr. Edmund Craig, of Cheviot, for the 2d best 12 Verbenas, the premium of \$2 00. He also exhibited a collection of Green-house Plants.

## THE FRUIT COMMITTEE'S REPORT.

STRAWBERRIES.—After carefully examining and comparing the collections of fruits presented your committee, they have awarded as follows:

For best pint of Strawberries, to H. Ives. Variety—McAvoy's Superior; premium \$2.

For second best pint of Strawberries, to F. Schneicke. Variety—Longworth's Prolific; . premium \$1

For best 6 varieties to T. V. Peticolas. Varieties — McAvoy's Superior, Jenney's Seedling, Hudson, Hovey's Seedling, Burr's New Pine, Willey; . premium \$3

For largest and best display, Joseph Dunlap, gardener to P. Outcalt. Eight varieties, among them several plates of McAvoy's Superior and Longworth's Prolific, which were extra fine; . premium \$4

The committee desire also to speak of the following exhibited collections, creditable alike to themselves as growers, and to your

society as members exhibiting, and adding to the interest and value of the exhibition.

C. Limpert, Columbus, through hands of M. B. Bateham, Esq., a very fine plate of Hovey's Seedling.

D. McAvoy, several plates of McAvoy's Superior, not entered for competition.

Mrs. S. Rintz, Mrs. Carter, and Mrs. Louderback who exhibited a large quantity of McAvoy's Superior, grown by Mr. Levasor, of Kentucky, which were large and of unusually fine form.

W. E. Mears and J. Howarth, each had plates of beautiful berries, worthy of commendation. Mr. Mears presented fifteen kinds, among which his Boston Pine were finer than ever shown here.

CHERRIES.—The collections of cherries were not extensive, nor were the specimens very well ripened, it being about one week too early for exhibition of what your committee know to abound in gardens around our city, yet some specimens of "May Duke" were very fine, as also some of the "Early Richmond." Our awards have been made as follows:

For the best pint, to Mrs. Rintz, . \$2 00

For best display, M. McWilliams—premium, . 3 00

For best variety, "May Duke," to do., 2 00

There were also plates of "May Dukes," Kentish, Early Richmond, etc., from P. S. Bush, R. Buchanan, T. V. Peticolas and W. Heaver, which added much to the interest of the exhibition.

Your committee can not avoid entreating your favorable notice of a collection of foreign grapes, well ripened, and exhibited by W. Heaver, Nurseryman and Florist. The collection embraced six varieties, regarded as among the most desirable for graperies, and which, during the exhibition, attracted the notice of all visitors. And as a testimony due from the Society to every one who labors thus to add to her interests as well as the advancement of Horticulture, your committee award to Mr. Heaver a Diploma and a premium of . \$5 00

We beg leave also through the Society, to commend the generous view taken of Horticulture by our associate, N. Longworth, Esq., who in saving and causing to be grown, seed of the Strawberry, has thereby produced new varieties which must

wherever grown, command the admiration of all lovers of pomology, while they result to the advantage of the public health and the pecuniary resources of the commercial dealer. We found Apples in fair condition, by J. A. Warder, Rawle's Janet; Newtown Pippin, from J. C. Rogers, Elizaville, Kentucky, and another unknown variety. Also collections from R. Buchanan, T. V. Petcolas, and Wm. Mears.

The committee would add that McAvoy's Superior Strawberry, to which the Society awarded a prize of one hundred dollars in 1852, has continued to maintain its reputation; and the experience of two years, and the exhibition at the same time fully justifies the award of the prize referred to. The success of the efforts of this Society to improve our fruit, are exemplified by the proof that in this Strawberry we have a better variety than had ever been cultivated in this vicinity before.

F. R. ELLIOTT,  
J. P. FOOTE,  
STEPHEN MOSHER,  
D. McAVOY.

#### REPORT OF VEGETABLE COMMITTEE.

The exhibition of Vegetables consisted of Rhubarb, very large and fine, by A. Worthington.

Dr. Mosher—Victoria Rhubarb. This variety maintains its high reputation, and is recommended for cultivation by our market gardeners, as a variety both profitable to the cultivator and generally approved by consumers.

Michael Rice from Jos. Longworth's garden—3 varieties of Radishes, 6 heads of Lettuce.

T. V. Petcolas—Mammoth Rhubarb.

Wm. Orange—4 plates of Peas, and 2 bunches of Asparagus.

Mr. Edward Morris' collection of well-grown vegetables consisting of the following articles: 2 fine Cauliflowers, 3 varieties of Rhubarb, a lot of early Turnips, a lot of early Carrots, 2 large bundles of fine Asparagus, and 12 Cucumbers, to which the committee awarded an extra prize of \$3.

J. P. FOOTE,  
Wm. Cox, Sr., } Committee.  
RICH. DAVIES, }

#### REPORT OF THE FRUIT COMMITTEE.

To whom were referred the specimens exhibited June 11th, 1853.

*To the President and Members of the Cincinnati Horticultural Society.*

Gentlemen:—No one who was present at the last meeting of our society, could fail to have been highly gratified with the extent, variety and perfection of the profuse display of cherries which loaded our tables. It was made a gratifying task to your committee, though a laborious one, which we endeavored to discharge to the best of our ability, and herewith transmit the results, premising, that in the lists hereto appended those names which are passed without remark, are believed to be correct.

This display was exceedingly gratifying to us, not merely as an exhibition of the forethought of those who planted the trees, but also, evidence that our soils and climate are not so adverse to the culture of this choice genus of fruit, as has been heretofore boldly asserted. It is true many have been unfortunate in their planting of cherry trees, and perhaps as large a proportion as one-half of all that have been set within ten years have already ceased to exist, but we can not fail to be encouraged with such a display as this before us, and urge every one to continue planting, and to exercise every precaution in the care of their orchards; especially to select a dry soil, to plant the trees well, and lastly, to protect their stems from the action of the sun in winter, either by a couple of boards set against the southerly aspect of the tree, binding with straw, or, perhaps better still, by forcing the trees to branch very low.

We found the collection of J. M. Millikin, from Hamilton, Ohio, to embrace plates of Elton, Black Eagle, Yellow Spanish, Red Bigarreau and Early Richmond, each variety correct and good specimens. It will be recollected that this gentleman once exhibited a superb display upon our tables.

From J. O. Petcolas, of Clermont county, White Bigarreau, Gridley, Florence, Belle de Choisy, a seedling, Black Tartarian, a variety unknown, Early Richmond, Late Duke, Black Heart and May Duke.

The collections of Mr. McWilliams, were like everything he brings to us, choice, very fine and correct to names; they consisted of

Yellow Spanish, May Duke, Black Eagle and Napoleon.

P. S. Bush, of Covington, Kentucky, showed Late Duke, Elton, Napoleon, Early Richmond, the latter of which were hanging in dense clusters.

R. Buchanan presented the largest collection, numbering thirty-seven plates, among which were some of delicious character, and others which puzzled your committee as to their identity; of the first class we may name Black Tartarian, Black Eagle, Belle de Choisy, May Duke, Prince's Duke, which differs from its namesake Dukes, Downton, Russiaf, Hyde's Seedling, Elton, all of which are worthy of especial note; here were also Black Heart, Black Honey, a variety not known, Napoleon, Holman's Duke, White Bigarreau, Barr's do., Spotted do., American Amber, Swedish, supposed to be the same as preceding, Honey Heart, not the Honey described by Thomas, Downers's Late Red, Sparhawk's Honey, Horence, and Circassian, believed to be identical with it, Yellow Spanish, not identified, perhaps too immature, Carnation, Early May and Early Richmond, which two latter varieties are supposed to be different although we must confess we were at a loss how to decide their respective names.

William Heaver, of Reading Road nursery, made a beautiful display of thirteen varieties, which were exhibited with their wood and leaves, which were of great assistance to the committee in deciding upon their kinds, Transparent Guigne, Spotted Bigarreau, very handsome, Belle de Choisy, first-rate, May Duke, the same, Arch Duke, Late Duke, Bleeding Heart, Black Heart, White Bigarreau, American Amber, Arden's White Heart, much admired, Manning's Mottled handsome, Seedling—poor.

Julius Brace exhibited good specimens of the May Duke, Early May, Belle de Choisy and American Amber.

Peter Outcalt, from his beautiful residence at Clifton, brought very choice specimens of Belle de Choisy, Black Tartarian, Elton, Horence, Holman's Duke, Early May and Early Richmond, decidedly different. The delicious Early Purple Guigne was, as usual, destroyed by the birds as fast as they ripened, to the great annoyance of the proprietor, and regret of the committee, for this is

almost the only bearing tree of the variety in our vicinity.

S. S. Jackson presented some fine bunches of Coster Duke, a very good variety, procured from France, many years ago, Yellow Spanish, Black Tartarian, a seedling from it which is smaller, juicy, not so good, but very prolific, and another unknown, believed to be the Ox Heart, of Downing, well known in the New York market as the

F. G. Carey, of College Hill, the famous Cherry-grower of this county, presented a few of the thirty varieties he cultivates with success. Napoleon, very large, Black Tartarian, fine, White Bigarreau, handsome, Black Eagle, do., May Duke, very fine, Spanish (not yellow) Red, rich, acidulous juice, very good, believed to be Belle de Choisy, Honey Heart, not the Honey of Thomas, nor Sparhawk, very good, early, medium size, oblong, red; Mottled Bigarreau, not correct, the stone is too large; Early May, and Yellow Amber, not identified.

In conclusion we suggest the following classes as most hardy and best worthy of cultivation in this neighborhood: *Dukes* and *Morellos*, and, as a general rule, those varieties that do not make too free growth; further, that elevated positions, especially ridges, will probably be the most advantageous.

All which is respectfully submitted,

S. MOSHER,  
JOHN P. FOOTE,  
M. KELLY,  
S. S. JACKSON,  
JOHN SAYERS,  
T. V. PETICOLAS,  
JOHN A. WARDER.

#### The American Wine-Growers' Association

HELD their monthly meeting at Horticultural Hall, on Saturday, May 28th, 1853—Dr. Rehfuß presiding. The minutes were read and adopted. The meeting was not very large, owing to the busy season in the vineyards, trimming, tying and hoeing the vines.

The President read the following notice of a treatment of a mildew on vines, which he found in the *Volksfreund*, (People's Friend.) A solution of one ounce sulphuret of potassium to five gallons water, was used

by Mr. Sellogardener, in the vine houses of the king of Prussia, at Souci.

The vines are to be sprinkled a few days in succession, the affected plants are immediately cured, and the fungi did not appear on the others. A sponge solution was found injurious to the plants, but this strength was even found to have a beneficial effect upon the growth of the vines. The President suggested that it would also be useful for other plants, especially the Gooseberry, and added that he had applied the ashes of coal last year; they contain sulphurate of lime, and this may account for the absence of mildew on his vines last season. The active principle is probably the sulphureted hydrogen which is evolved.

It was stated that the frost of the 19th, 20th and 21st had not materially injured the vines, though it was feared that some spots in Indiana had suffered. The prospect for grapes, as well as other fruit, was considered very good. The worms are already attacking the buds and should be looked after with care.

The discussion on working the vineyards was postponed to the next meeting, when it will be resumed.

On the invitation of Mr. Heaver, of Reading Road Nursery, the Association adjourned to meet at his place on 25th of June.

#### **Cayuga Horticultural Society.**

At the annual meeting the following officers were chosen for the ensuing year:

*President*—H. T. DICKINSON.

*Vice Presidents*—P. R. Freeoff, George E. Barber, Oliver W. Wheeler, Auburn; John Morse, Aurelius.

*Corresponding Secretary*—Horace T. Cook, Auburn.

*Recording Secretary*—S. S. Graves, Auburn.

*Treasurer*—John S. Clary, Auburn.

*Managers*—William Osborn, L. Q. Sherwood, H. H. Bostwick, A. V. Pulsifer, William Cutting, Auburn; S. H. Higley, W. D. Osborn, Ments; John R. Pabe, Sennett; Solomon Giles, Weedsport.

#### **Springfield, Ill., Horticultural Exhibition.**

THE Fifth Annual Exhibition of this Society took place in the Rotunda of the Cap-

itol on Tuesday, June 7th, 1853. The heavy rains on several of the previous days greatly injured the flowers, but there were enough contributed, with the floral designs, plants, and other articles, to make a handsome Exhibition.

The contributions, as published in the *Springfield Journal*, were very numerous. The Editor is also President, and famous as a horticulturist throughout all that region. The account closes thus:

In view of the approaching State Fair, it is suggested that, as there will be a Horticultural and Floricultural Exhibition, the Ladies of this city should be prepared to sustain their high reputation in the exhibition of Flowers which is accorded to them in all parts of the State.

S. FRANCIS, President.

H. C. Watson, Secretary.

#### **The Louisville Horticultural Society**

Have a meeting and exhibition every Saturday morning for discussion of plants and fruits, with a view of perfecting a knowledge of nomenclature and value. Articles are solicited from neighboring towns. Specimens may be sent on Fridays, to care of A. G. Munn, seedman, or carried directly to the rooms next morning.

The Annual exhibition is to come off in September.

#### **Mobile Horticultural Society.**

This new ally south, held a Spring Exhibition in May, by way of showing a taste of its quality—and a right fair sample it appears to have been, notwithstanding the drought. The account appears in the *Alabama Planter*.

#### **Worcester County (Mass.) Horticultural Society.**

THE annual meeting of this Society was holden at the Horticultural Hall on Wednesday, January 5, 1853, when the following officers were elected for the current year, namely:

*President*—STEPHEN SALISBURY.

*Vice Presidents*—William T. Merrifield,

John C. Whitten of Northbridge, and George T. Rice.

*Treasurer*—Frederick William Paine.

*Secretary*—S. Henry Hill.

*Librarian*—C. Harris.

*Auditors*—G. T. Rice, W. M. Bickford.

**Milwaukee Horticultural Society**  
HELD its annual meeting for the election of officers for the current year:

*President*—HANS CROOKER.

*Vice Presidents*—Cyrus Hawley, Clarence Shepherd.

*Corresponding Secretary*—R. N. Messenger.

*Recording Secretary*—William H. Watson.

*Treasurer*—David Furguson.

*Executive Committee*—Charles Gifford, R. Parker, and A. S. Fuller.

## Correspondence.

### NOTES ON THE JUNE NUMBER.

*The Acclimation Question.*—I never read after Mr. Young, without regretting that he does not write more frequently, and allow himself more space upon each topic. Speaking with a gentleman a few days ago, upon the comparative merits of some samples of strawberries before us, he startled me with the remark: "I have one great objection to all strawberries." On inquiring what the objection could be, he stated—"they do not last long enough." Mr. Young's articles are liable to the same objection. His statistics about the cold storm of January, '52, are deeply interesting. The modifying effects of large bodies of water, are undoubtedly produced as he suggests, by the latent heat of their evaporated moisture, disarming the storm of its weapons, by the mobility of its particles, and shielding from the action of the bright succeeding sun, by the vapor thrown from the surface of the water into the cold atmosphere; but the effect of elevated positions seems to be produced by the increased specific gravity of the colder air, causing it to *flow down* into the valleys to be replaced by a current of warmer air far beyond the influence of the cold storm, according to the vacuum illustration given us by Mr. Young.

The mean temperature of a locality is not

a sure criterion by which to judge whether plants from a country of the same mean temperature, will stand the climate—the difference in the range of the thermometer—the position in reference to large bodies of water—frequency of cloudy weather in summer, and bright days in winter, and the nature of the soil, must all be taken into the account. So far as my observation extended, all the heart-cherries that were killed by the cold storm of January, 1852, were either in low situations, or in deep, moist, rich soil. In most cases, both those trees, in a dry, elevated, poorer soil, mostly escaped damage. The same is true of the beach and many other trees. Those in the former position, had probably made a later autumn growth, and the rich, moist soil caused a flow of sap every warm day in winter.

I hope Mr. Young will be a frequent contributor to the *Review*. It is to such practical men as he—living and having had their experience in our very midst—that we must look for instruction.

*The Beautiful in Horticulture.*—Not what you intended to write Dr. Kennicott. Why not? Could you have written better, or on a subject of more importance to your countrymen of the fertile West?

"A thing of beauty is a joy forever." The enjoyment afforded by beautiful objects is too little understood by us all; the first settlers were too busily engaged in supplying the absolute wants of their families, to think of cultivating their taste for the beautiful, even had they possessed it; these gave place to men who had set their hearts on making money, and who viewed the land only in its capacity to afford heavy money-producing crops, or as sites for towns—and their children—who are all naturally gardeners, are prevented from filling a few yards of garden with wild flowers—by the ridicule and discouragement of the avaricious parents, for the purpose of turning the labors of the child into a money-producing channel. Thus the innate love of the beautiful in nature, and horticulture, is crushed in the bud—as a weed—to make room for the rank-growing love of money, and the child grows up unable to appreciate the beauties by which his Maker has surrounded him, to live, make money, and die, as all his fathers did. Do write often on this subject. Tell your readers if their children have no flower-seed, to get some for them, and shew them how to plant it, and they will feel amply repaid when they bring them bouquets from their *own garden*, eked out, perhaps, with clover or dandelion blossoms—looking up with their little bright faces for the smile of approbation.

*Vernal Flowers.*—When we see the first *snow-drop* or *crocus*, pushing its delicate flowers from the frozen earth after a long winter, with what pleasure do we hail them as the bright harbingers of spring—and feel with the venerable David Thomas, that "the eye that would not brighten, or the heart glow" at the sight, "is to be pitied." Then if a few days later, we stroll in the woods, with what a thrill of pleasure do we see the first blue violet, dogstooth

violet and wood anemone, and the fugitive bloom of the blood-root. He is truly "to be pitied" who allows winter to merge into spring, without enjoying these beautiful gems of the season. Then, how much the love of flowers increases the enjoyments of age.

*Hybridizing.*—Have we not among us, hundreds of amateurs, who have the taste, leisure, and requisite knowledge, to keep the balance of trade in the floral world in our favor? Have we not yet paid enough for *new roses*, with hard French names, but questionable merits, to set up for ourselves? Our climate and soil offer great inducements in fruits as well as flowers. Every amateur should have a few seedlings coming on each year, even if not disposed to undertake the delicate process of artificial impregnation, the seed from a bed of mixed roses, or an orchard of mixed fruit *might* give something very desirable. Some of our best fruits and flowers are natural hybrids. The new *Augusta rose*, about which our expectations are now on tip-toe, is said to be one of this description.

*Nomenclature* certainly requires some attention from pomologists. Your suggestion as to classifying under generic names, is worthy of notice; this is one of the labors for which we must look to the National Society, whose dicta and postulates will meet with more favor than yours or mine.

*Curculio again.*—Yes, and still again—we must talk about him, read about him, think about him, and write about him for some time I fear, before a perfect remedy is found; but every one who owns a plum tree, will be led to try some of the many remedies he hears or reads about, and thus thousands of the *Turks* will bite the dust, who otherwise would have gone on to "replenish the earth." There is a good time coming—thousands are now experimenting.

*Egeria prevented.*—Your correspondent A. K., speaks of a long experience with *leached ashes*. They are undoubtedly a preventive. His complaints at the close of his article about *badly packed grape vines*, should be sounded in the nurserymen's ears till they ring. How many fine trees are annually ruined by careless taking up and packing. (Gentlemen, give this matter attention—travel a few times with our carelessly put-up trees, to their destination, and see them unpacked, and if you do not mend your ways, you are harder sinners than I took you for.

*Cultivating Orchards.*—Not amiss to repeat a valuable article occasionally; in this instance probably more from accident than design. Read it again carefully, you who overtax your orchards, and reform the custom.

P.

#### Frontispiece.

THIS is the plan of a house and out-buildings based chiefly on one which we built of wood some years since on a farm of our own, and which, in its occupation, has proved to be one of exceeding convenience to the purposes intended. As a farm *business* house, we have not known it excelled; nor in the ease and facility of doing up the house-work within it, do we know a better. It has a subdued, quiet, unpretending look; yet will accommodate a family of a dozen workmen, besides the females engaged in the household work, with perfect convenience; or if occupied by a farmer with but his own family around him, ample room is afforded them for a most comfortable mode of life, and sufficient for the requirements of a farm of two, to three or four hundred acres.

This house is, in the main body,  $36 \times 22$  feet, one and a half stories high, with a projection on the rear  $34 \times 16$  feet, for the kitchen and its offices; and a still further addition to that, of  $26 \times 18$  feet, for wash-room. The main body of the house is 14 feet high to the plates; the lower rooms are 9 feet high; the roof has a pitch of  $35^\circ$  from a horizontal line, giving partially-upright chambers in the main building, and roof

lodging rooms in the rear. The rear, or kitchen part, is one story high, with 10 feet posts, and such pitch of roof (which last runs at right angles to the main body, and laps on to the main roof,) as will carry the peak up to the same air line. This addition should retreat 6 inches from the line of the main building, on the side given in the design, and 18 inches on the rear. The rooms on this kitchen floor are 8 feet high, leaving one foot above the upper floor, under the roof, as a chamber garret, or lumber-room, as may be required. Beyond this, in the rear, is the other extension spoken of, with posts 9 feet high, for a buttry, closet, or dairy, or all three combined, and a wash-room; the floor of which is on a level with the last, and the roof running in the same direction, and of the same pitch. In front of this wash-room, where not covered by the wood-house, is an open porch 8 feet wide and 10 feet long, the roof of which runs out at a less angle than the others—say  $30^\circ$  from a horizontal line. Attached to this is the wood-house, running off by way of L, at right angles,  $36 \times 16$  feet, of same height as the wash-room.

Adjoining the wood-house, on the same front line, is a building  $50 \times 20$  feet, with 12 feet posts, occupied as a workshop, wagon-house, stable, and store-room, with a lean-to on the last of  $16 \times 10$  feet, for a piggery. The several rooms in this building are 8 feet high, affording a good lumber-room over the work-shop, and hay storage over the wagon-house and stable. Over the wagon-house is a gable, with a blind window swinging on hinges, for receiving hay, thus relieving the long, uniform line of roof, and affording ample accommodation on each side to a pigeon-house or dove-cote, if required.

The style of this establishment is of plain Italian, or bracketed, and may be equally applied to stone, brick, or wood. The roofs are broad, and protect the walls by their full projection over them, 2½ feet. The small gable in the front roof of the main dwelling relieves it of its otherwise straight uniformity, and affords a high door-window opening on to the deck of the veranda, which latter should be 8 or 10 feet in width. The shallow windows, also, over the wings of the veranda give it a more cheerful expression. The lower end windows of this part of the house are hooded, or sheltered by a

cheap roof, which gives them a snug and most comfortable appearance. The veranda may appear more ornamental than the plain character of the house requires; but any superfluous work on it may be omitted, and the style of finish conformed to the other. The veranda roof is flatter than that of the house, but it may be made perfectly tight by closer shingling, and paint; while the deck or platform in the center may be roofed with zinc, or tin, and a coat of sanded paint laid upon it. The front chimney is plain, yet in keeping with the general style of the house, and may be made of ordinary bricks. The two parts of the chimney, as they appear in the front rooms, are drawn together as they pass through the chamber above,

and become one at the roof. The kitchen chimneys pass up through the peaks of their respective roofs, and should be in like character with the other.

This house will appear equally well-built of wood, brick, or stone. Its cost, according to materials, or finish, may be \$1,000 or \$1,500. The out-buildings attached, will add \$400 to \$600, with the same conditions as to finish; but the whole may be substantially and well-built of either stone, brick, or wood, where each may be had at equal convenience, for \$2,000 in the interior of New York. Of course, it is intended to do all the work plain, and in character for the occupation to which it is intended.—*Allen's Rural Architecture.*

### METEOROLOGICAL TABLE.

CINCINNATI, MAY, 1853.

THERMOM.			WEATHER.			RAIN.	SNOW.	Date.	WINDS, ETC.	
Date.	Min.	Max.	Sunrise.	Noon.	Sunset.					
1	54	80	clear . . .	clear . . .	clear . . .	.19	....	1	Calm; light E; and var. Rain at night	
2	64	79	variable . .	variable . .	do. ....	....	....	2	Calm; light SE. and SW.; calm.	
3	61	81	clear. ....	clear. ....	rain var. .	.09	....	3	Light S.; brisk S.; light SW.	
4	65	74	variable ..	rain ..	variable ..	.16	....	4	Light SW.; light SE.	
5	62	76	do. ....	variable ..	clear ...	....	....	5	Light SW.; brisk S.	
6	61	74	clear ...	clear ...	do. ....	....	....	6	Light SW.; brisk W.	
7	55	75	rain ...	do. ....	do. ....	.15	....	7	Light SW.; brisk NW.; light W.	
8	54	65	variable ..	do. ....	do. ....	....	....	8	Light NW. and W.; calm.	
9	56	65	clear ...	cloudy ..	rain. ....	.17	....	9	Light SE.; brisk SW.; high SW. and W.; light W. and SW. (light W.)	
10	47	64	do. ....	clear ...	clear ...	....	....	10	Calm; light W. and NW.; brisk W.	
11	64	72	do. ....	do. ....	do. ....	....	....	11	Calm; light S.; brisk S.; light S.	
12	60	69	variable ..	do. ....	clear, rain	.12	....	12	Light S., SW., W. and N.	
13	48	70	clear ...	do. ....	clear ...	....	....	13	Light N. and NE.; light N.	
14	48	81	do. ....	do. ....	do. ....	....	....	14	Calm; light SE. Calm at eve.	
15	60	85	do. ....	variable ..	do. ....	....	....	15	Calm; brisk S.; high S. (Strawberries.)	
16	71	89	do. ....	do. ....	clear, rain	.23	....	16	Light SW.; thunder. Squally at night.	
17	64	87	do. ....	clear ...	rain ...	.25	....	17	Calm; light S.; light SE. (Peas.)	
18	69	87	do. ....	do. ....	do. ....	.61	....	18	Light SW.; brisk SW.; high NW.; light	
19	48	61	variable ..	do. ....	clear ...	....	....	19	Brisk NW. (SW.; squally.)	
20	45	70	clear ...	do. ....	do. ....	....	....	20	Light NW.; light SW.; calm.	
21	50	79	do. ....	do. ....	do. ....	....	....	21	Calm; light SW. (Cherries.)	
22	61	83	do. ....	do. ....	var. rain .	.24	....	22	Light S.; brisk S.; high S.; light S.	
23	64	74	cloudy ...	do. ....	clear ...	....	....	23	Light NW.; light SW. and W.	
24	51	64	clear ...	variable ..	do. ....	....	....	24	Light N.	
25	52	69	do. ....	do. ....	do. ....	....	....	25	Light NW.	
26	48	75	do. ....	do. ....	do. ....	....	....	26	Calm; light SW. and W.	
27	51	73	do. ....	do. ....	variable ..	....	....	27	Light S. and SW. Calm at eve.	
28	57	82	haze, clear	clear ...	clear ...	....	....	28	Calm; light S.	
29	59	85	clear ...	do. ....	do. ....	....	....	29	Calm; light S.	
30	70	81	do. ....	do. ....	do. ....	....	....	30	Light SW. and NW.	
31	59	79	do. ....	do. ....	do. ....	....	....	31	Light E. and NE.; calm,	
Rain in the month, inches,						2.21	000	Clear days in the month, .....		12
Av'r. quan. rain in May for ten years, inch.,						4.02		Variable—sun visible, .....		19
								Cloudy—sun not visible, .....		0

REMARKS.—The frequent showers [10] in this month being light, have failed to afford the usual average of water; and as the sun shone every day in the month—causing rapid evaporation—vegetation begins to require a supply of that fluid.

White frost occurred in this vicinity on the morning

of the 20th, but it does not appear to have been of sufficient intensity to cause any injury.

The mean temperature is a fraction over the mean for May of the last ten years. JOHN L.E.A.

ERROR.—Depth of rain on the 16th April—for 1.81, read .81.



Univ. of  
CALIFORNIA



A Farm House. [ALLEN'S ARCHITECTURE, P. 114.]

FRONTISPIECE TO VOL. 2.



VOL. III.

AUGUST, 1853.

No. 11.

## Miscellaneous.

### PUBLIC PARKS.



**T**HIS important subject seems to be at length attracting the attention of our citizens, and who does not wish for a retreat of this kind during the dog days? We have already postponed action upon this subject too long, but continued delay only increases the difficulty. I was forcibly struck with the willfulness of cities in refusing proffered benefits of this kind, when, at Alleghany City, I heard that a noble bequest of more than one hundred acres, now in the heart of that city, had been variously appropriated to other objects, so that there remains only enough for a magnificent border, and which may be made highly ornamental.—Ed.

*To the Hon., the City Council of Cincinnati:*

The subscribers, a committee appointed by the Cincinnati Horticultural Society to memorialize your honorable body on the subject of providing parks or promenade grounds for our city, beg leave respectfully to represent:

That the importance of pleasure grounds or promenades to the health and comfort of

the inhabitants of large cities is so generally understood and admitted that a neglect to provide them is considered not merely a venial oversight, but a positively disgraceful characteristic in the constituted authorities of a city. It is not merely a refusal to stimulate the growth and prosperity of a place, but a denial of justice to that class of citizens whose labors contribute most to such growth and prosperity.

The increased attraction of those institutions to which we refer, whereby the progress of population and consequent increase of wealth is promoted, has been so generally appreciated by the founders of towns and cities, that in most cases early provision has been made for them by the dedication of grounds for such purpose. This provision was supposed to have been made by the founders of our city, and though on a small scale, compared with its present wants, yet large enough for the expectations formed of its destinies at that time. Small, however, as was the appropriation, it was too large for the small men who have so managed the concerns of the city, that all the grounds origin-

ally intended for open squares have been diverted from their proper use, and we have now for public parks only those diminutive strips on Eighth street, given by the owners of the property adjoining—the ground lately purchased for the city buildings, and the small space of ground purchased with the water-works, which last elicits commendations of the city council from all classes, for the measures they have taken to embellish and make it an ornamental feature among our public works.

There are within the city limits small tracts of ground belonging to the Episcopal, the Methodist, the Presbyterian and other denominations, which have been dedicated to the purpose of burial grounds, and which, since the establishment of Spring Grove and other public Cemeteries, will no longer be used for that purpose, and if the city would aid in removing such of the monuments and remains as it would be desirable to have removed, and then improve the grounds suitably and keep them open for the public use, there can be but little doubt that the proprietors would consent to such a public improvement.

The opportunities of procuring the necessary grounds for public purposes have been too much neglected, and this neglect can not too soon be remedied. This committee is informed that several tracts of land for public parks can now be obtained on terms very advantageous to the city, on condition of their being appropriated to such purposes, a list of which tracts is hereto annexed. These grounds being pleasantly varied in surface, with a sufficient number of forest trees, and from various points overlooking our city and the neighboring cities of Covington and Newport, in Kentucky, would, if suitably improved and connected with the avenues proposed herein, give us public promenade grounds not excelled in all qual-

ifications required in such grounds by any city in the Union, except, perhaps, New York, with its Battery.

It would be as narrow a policy which should decline making the purchase of these grounds on account of their cost at this time, and as ill-judged a specimen of penny-wise parsimony, as was the refusal to purchase for the city landing the river front, from Deer creek to Western Row, when it could have been obtained for \$80,000, or the neglect to take the Burnet square when it was offered for \$25,000, and of which less than one tenth part has lately been sold for \$50,000.

The avenues above referred to, which it is proposed to the city to open and establish, are : One from the city boundary, near the Brighton House, to extend through the grounds belonging to the heirs of Riddle, and the proposed parks, along the brow of the hills north of the city, as nearly as practicable, and terminating at Fulton on the east, near the river, and on the west, intended to be continued along the valley of Millcreek, on the sides of the hills adjoining, by the proprietors of the land through which it will pass. The other avenue to commence at the present termination of Sixth street, and to meet the main avenue on Walnut Hills. These avenues to be two hundred and fifty or three hundred feet wide, and to be improved in a suitable manner, by planting trees, and fitting them up for walks and drives, whereby all classes of citizens might be accommodated with the means of pleasant and healthful recreation. These would give us such a system of public grounds as would justify the proud title which has been assumed for our city, of *Queen of the West*, and which title will be lost, or ironically cast in our teeth in derision of our high aspirations, and of the meanness of our attempts to support them, if we continue, with the

increase of our population, to diminish the width of our streets and the dimensions of our building lots, and sell grounds for the purpose of being covered with buildings which were intended originally to be kept open for the ornament of the city, and the public benefit of its inhabitants.

So many modes of destruction to human life have been opened to us through the progress of modern inventions by the aid of railways, steamboats, etc., that although it may seem inconsistent with the "manifest destiny" of Young America to attend to old modes of doing anything, yet, as we have Scripture warrant for the belief that it is better to save life than to kill, we hope that one of the old modes of preserving life and health by the aids of pure air and cleanliness, and room for freedom of movement; may be tolerated; and if we must sacrifice so many of those who travel, that we may be permitted to pay a little more attention to the preservation of those who stay at home, and to guard them as far as practicable from the diseases generated in large cities, through the neglect of those hygienic aids which may and ought to be offered to all the citizens.

Where so much ground is covered with brick and mortar, and so much with that filth in which is sowed the seeds of disease, as is the case in this and other large cities, strict attention to all matters affecting the public health is an imperative duty imposed upon the guardians of the public weal. And although they can not prevent those deaths which are caused by the carelessness of those who consider nothing so important as to go ahead, yet they can lessen the number of those slow and lingering deaths caused by unwholesome alleys and streets, and the want of a healthy atmosphere, for those who devote their lives to toil, for the production of those comforts and conveniences

of life which increase public and private happiness.

The Cincinnati Horticultural Society, an institution established for the promotion of the public welfare, and which refers to the history of its proceedings for proof of its zeal and fidelity to that object, offers the aid of the taste and judgment of its members in the improvement of the public grounds of the city; and their services, whenever considered desirable, will be cheerfully given in aid of all such public works as may be benefitted by their knowledge and experience.

All of which is respectfully submitted,

JNO. P. FOOTE,  
GEO. GRAHAM,  
R. BUCHANAN,  
JOHN LEA,  
GEORGE HILL,  
JAS. W. WARD,

*Com. of  
Cin. Hort.  
Society.*

List of tracts of land which the above committee have ascertained can be procured on suitable terms:

150 acres belonging to G. W. Burnet, on both sides of the northern boundary of the city.

15 acres belonging to G. K. Shoenberger, on Vine street hill.

Also, on Vine street hill, the following lots may be obtained, which could be united in one park; 7 acres belonging to G. Graham; J. Hall, 2 acres; Mrs. Thompson, 3 acres; A. Shawk, 3 acres; N. T. Horton, 10 acres.

#### Climate and Productions.

HAVING shown the variety of causes which affect the temperature and climate, in previous numbers, we now add a concise view of the productions which belong to each. These facts may be presented in various forms. The shortest and most comprehensive is the following:—

The equatorial zone is the region of palms and bananas.

The tropical, of tree ferns and figs.

The sub-tropical, of myrtles and laurels.

The warm temperate, of evergreen trees.

The cold temperate, of European and deciduous trees.

The sub-artic, of rhododendrons.

The polar, of alpine plants.

The following statement of the vegetation of different latitudes has been given by good authority:

The northern limit of fine spices,	-	-	25°
do. sugar-cane and coffee,	-	-	30°
do. cotton and olives,	-	-	40°
do. wine grape,	-	-	45°
do. wheat,	-	-	52°
do. cultivation,	-	-	59°

A more detailed statement is given thus in one of the manuals:

The range of the indigenous or natural growth of maize, Indian corn and tobacco,	40° S. to 50° N.
Sugar-cane and coffee,	30° S. to 30° N.
Rice, cotton, olive, fig, almond, orange and lemon,	37° S. to 40° N.
Cocoa or chocolate nut,	20° S. to 20° N.
Cocoa-nut, pine-apple, guava, banana and tamarind,	23° S. to 23° N.
Ironwood, box, mahogany, etc., dye-woods and palm trees,	23° S. to 24° N.
Cassava, arrow-root, bread-fruit and yam,	24° S. to 25° N.
Pepper, spices and fine gums,	23° S. to 23° N.
Wine grape,	15° to 40° S.
Barley, apples, pine, etc.	25° to

Important differences, however, exist in different localities of the same latitude and having the same climate. Thus, in the temperate zones of the Eastern continent, and especially of middle Europe, the soil is composed of volcanic rocks, which furnish abundance of alkali, and is covered with oaks, elms, beech, ash, larch, maple, lime, alder and sycamore trees—all of which are deciduous, that is, drop their leaves in autumn—mixed occasionally also with fir or pine. The undergrowth consists of wild apples, cherry, yew, holly, hawthorn, broom, furze, wild rose, honeysuckle, clematis, etc.

Further south, evergreen trees and shrubs become more frequent, while their Flora consists of ilex, oak, cypress, hornbeam, sweet chestnut, laurel, laurustinus, the apple tribe, manna, jujube, juniper, terebinths and other plants which yield resin and mastic, the arbutus, myrtle, jessamine, etc.

The Malayan peninsular, beyond the Ganges, is the land of dye-woods of vivid hues, of spices and medicinal drugs. Teak is plentiful. Seven species of native oak are found there, as also tamias, cycadese, orchideae, tree ferns, etc. The Palmyra palm

grows in the valleys. Bamboos reach a large size.

Similar to the last are the regions of the Indian archipelago, tropical India and Ceylon. Pines, oaks, rhododendrons, magnolias, valerians, honeysuckles, oleanders, gentians, etc., are indigenous. Palm trees are abundant. Jungle and dense pestilential woods abound on the smaller islands and on the coasts of the larger. Mangrove, bamboos, gutta percha and the teak are also found. On the plains of Hindostan we find arborescent and tree-like ferns and orchideous plants. The orange tribe is a native of India, as also the ginger tribes, banana, guava, mango, date, cocoa-nut, plantain, etc., with cotton, figs and camphor. Rice is supposed to be indigenous to south-eastern Asia.

The vegetation of western Asia resembles that of India at one extremity, and Europe at the other. Syria and Asia Minor, like other countries on the Mediterranean, form a sort of transition region, where the plants of the temperate and tropical regions are united. In Asia Minor, are the cherry, almond, cleander, syringa, locust, etc. In Persia, the walnut, peach, melon, cucumber, hyacinth, ranunculus, etc. In Syria, the date, palm, fig, olive, mulberry, damask rose, etc. In Armenia, the vine and apricot; while the last is found everywhere in middle and Northern Asia. In the more sheltered regions are the sugar-cane, date, palmetto, palms, mimosas, acacias, asclepias gigantea; and on the mountains south of the Black Sea are American types in the rhododendron and azalea pontica.

The vegetation of eastern Asia, where the soil and climate are less promising, includes thorny bushes, acacias, tamarisks, mimosas, jujube, asafetida, etc. The Lusanian Mountains are covered with forests of oak. The date palm forms the growth of the parched shores of the Arabian Gulf, and the oases of the Persian table-land. Plane trees, hawthorns, tree roses, etc., are found in the valleys. Afghanistan produces the seedless pomegranates, acacias, date palms, tamarisks, etc. Teas grow in the Himalayan Mountains: sweet orange in Japan.

In Africa, south of the Atlas, we find the date palm, which is *cultivated* also in North Africa. In Egypt are acacias, mimosas, cassia, tamarisks, the lotus, the papyrus, etc.

In the islands of Polynesia, are the land of the cocoa-nut tree and of bananas. Fifty varieties of the bread-fruit tree are found there.

All the finer gums and spices are confined to tropical regions. Cloves and nutmegs are confined to the Moluccas, and that species of laurel which produces the true cinnamon is found only in Ceylon. Cocoa-nuts flourish on the sea-coasts of most tropical countries. The tree is a palm, of which there are a thousand species. Dates are another species of palm. The palms produce flour, sugar, milk, oil, flax, salt, thread, utensils, weapons and habitations.

Of all tropical regions, South America supplies the greatest variety of species. It produces twice as many species as Europe, nearly three times as many as Asia, and more than four times as many as Africa. The grandeur of the Brazilian Flora is nowhere equalled. Rice grows spontaneously, and maize is raised on the plains even under the equator. The sugar-cane grows luxuriantly only within the tropics, though it is indigenous both in south-eastern Asia, and in tropical America. The most extensive plantations are in the West Indies and Brazil.

The chocolate nut grows chiefly in South America. The arrowroot is a native of South America, but is cultivated in the West Indies and Ceylon. Peruvian bark is found on the sides of the Andes; more than twenty species are found there. Pine-apples grow in Mexico, Guatemala and the West Indies, as they do also in southern China, and in India. Plantains, guavas and bananas grow in the West Indies, Central America and South America. Also, the tamarind and cassava or manioc root. Tamarinds are also indigenous to India. Vanilla is produced in Mexico and South America. The *strychnus toxicaria*, which yields the deadly woorai poison, is found in Guiana.

The catalpa, (which grows spontaneously as far as about latitude 37°,) hibiscus, magnolias, cypress, etc., represents the Flora of Virginia. Cotton comes to maturity as far north as Newcastle county, Delaware. The evergreen pine, maple, red beech, scarlet oak and purple nissa, represent the Middle States. On the Atlantic coast are found the American chestnut and kalmias. West of the Alleghanies are the locust trees,

hibiscus, hydrangeas, etc. In Canada are vast forests of pines, oaks, ash, hickory, birch, the lofty Canadian poplar, sugar-maple, etc., with kalmias, azaleas, asters and solidagos. South of the arctic region are forests of black and white spruce, with an undergrowth of reindeer moss, gooseberries, strawberries, currants, etc. The Flora of Greenland is more arctic than that of Iceland.

The most northern Flora is the *Palmetta nivalis*, or snow plant, of the polar regions, birches and willows of a few inches in height. Trees are not found beyond 70°, which is also the last trace of antarctic vegetation. Barley grows in the Faroe Islands, near North Cape, latitude 71°. Rye not beyond 67°. Oats are limited to 65°. Potatoes grow under the 69th degree. Norway and Sweeden are the only lands within the polar circle susceptible of tillage. At 60° we find the elm, maple, ash and beech, and wheat in favorable situations. In Siberia, grain will not grow beyond 59°. The remotest tillage in North America, hitherto, is in latitude 54°.—*The Plough, Loom and Anvil.*

#### Development and Relations of Plants.

HERE every law seems double, or to have a counterpart. The vital power is subject to the law of gravity; but while the plant tends downward, it raises upward too. The same power includes the mechanical forces producing motion; but it has the two-fold force of attracting and repelling at the same point. It is also chemical, changing the nature of the substance on which it acts; but it also supports itself by the change. It exhibits affinity, but to affinity it adds assimilation. Not only has it forms of symmetry, and forms, some of which do not appear possible to crystals, (as the pentagonal;) but while there is reason to believe that in the crystal the form depends on the matter, in the organic symmetry the matter appears to be subordinate to form. It has activity, but beyond this it supports its activity by its action, increases its strength by exercise. Owing to its superiority over all the pre-existing powers of nature, it is that, during its presence in the organized structure, it holds them all in subjection. And hence, the vital principle no sooner

secedes, than these ordinary laws return, dissolve the structure, and causes the separate parts to enter into new combinations, distinct from those under which they had existed as a living body.

And what is still more remarkable, different plant-cells possess different powers in this respect. With little more than the four elementary bodies—carbon, hydrogen, oxygen and nitrogen—they are found to elaborate an almost endless series of what are called "proximate organic principles," of the most diverse properties; one cell secreting one principle, and another, another principle, by simply combining these elements in slightly different proportions. Here, again, is the binary principle of organic union; but here is also a form of union entirely unknown in that division of science. Instead of combinations by pairs, here are three or four substances bound up together into a single group—a set of ternary, and quaternary compounds—constituting one indivisible whole, and exhibiting properties before unknown.

But this superiority of organic nature involves other points of distinction, with which there is nothing in inorganic nature to compare. The vital principle includes excitability. We are aware that certain phenomena exhibited by plants have by some been regarded as proofs of the presence of irritability also; and even of sensibility. But as they appear to have nothing analogous to a nervous system, these phenomena seem to be only instances of the extreme action of excitability, by which we mean, generally, that property of the cellular tissue—the chief organ of nutrition—which "takes cognizance of the action of external influences upon it, and by which it resists those mechanical and chemical efforts which would otherwise soon succeed in decomposing its substance." \* And even when the mystery of life closes in the mystery of death, it is only the death of the individual structure we are called to witness. The living plant includes the mystery of propagation, the power of self-multiplication during life, and of continued reproduction after death. Were it an object, then, to distinguish between the inorganic and organic parts of nature, briefly and broadly, we might say, that while the

former originate fortuitously, enlarge externally and are terminated by mechanical or chemical force, the latter originate by propagation, grow by an internal power of assimilation and terminate by death.

*Relations.*—Relations are traceable between the various species of the subterraneous Flora and the co-existing conditions of inorganic nature. Not, indeed, that there is any evidence that a change of inorganic conditions necessitates the production of new forms of organic life, (as if these conditions were independent causes,) but that the production of such new forms of life presupposes a corresponding change of inorganic conditions.

Internal relations are also traceable, or correspondences, between the various parts of the vegetable creation. Type is the very term which naturalists have chosen to express this resemblance. When speaking of crystals we remark that their forms suggested the idea of likeness or resemblance. We may expect, then, that in organic bodies also we shall find this analogy, and something else in addition. And we do so; we find resemblance of nature and habits. Now this is the difference in natural history between analogy and affinity: analogy is superficial resemblance; affinity is resemblance of internal structure, properties and habits. But in order to ascertain the affinity of organic bodies, the relative importance of the different parts compared must be determined; as, for example, whether resemblance between the organs of nutrition in two species, is to reckon for more than resemblance between the organs of reproduction, or for less. The number of affinities present, which may be regarded as an equivalent for the absence of other affinities, must be settled. Now when these laws of classification are ascertained, a type or specimen is to be taken, and the question asked, "Which approaches the nearest to it in all the affinities which characterize the class; and which the nearest to this," and so on. The result will be the formation of a natural group around the characteristic type. This will not be found to form a direct or linear series, answering to the figure of a chain, or of a cone of being to a circular quinary, or dichotomous system, or to an precise artificial arrangement. It may form a figure very irregular at its cir-

\* Hinslow's Botany, page 161.



cumference, for it seeks no boundary line without; it enlarges from the central type, and as it ramifies in various directions its continuity may be that of a branching tree. But so evident is its continuity, that the attempt at natural classification can hardly be begun before the mind becomes impressed with the firm persuasion that analogy and affinity reign throughout—that the whole botanical kingdom is constructed on a plan. From the all-related nature of organic forms it follows, also, that a modification of any one part of a plant supposes the modification of every other part. And, accordingly, it is found that a change of one organic function involves a corresponding change of the whole body.—*Pre-Adamite Earth.*

#### Ornamental Gardening.

**Mrs. S. S. EDITORS:**—As your valuable Soil of the South appears to be open to experimentalists as well as practicable men, I trust you will find the following desultory communication relating to rural and ornamental gardening worth your notice. As an axiom, the love of rural scenery and the capacity to enjoy it, are universal and common to man. Indeed there seems to have existed in him from early times, a general desire to control the operations of nature when in the vicinity of his dwelling.

In the Southern States the go-ahead steamboat policy of "all cotton and California dross," and nothing else, induces the millionaire, the wealthy planter, merchant and tradesman, to pay but little attention to the study of rural improvement, or anything which would ennoble home in the shape of an improved homestead, out-buildings, fruits, cottage, farm, and ornamental gardening; consequently they have to run the "Indian muck," and pass through many experimental stages on their way to eminence.

The style of building, and the form and features of a country residence, have been greatly improved by the scientific contributions of the lamented Downing, who, adopting nature for his model, selected the favorable, the beautiful and striking features of rural scenery, and studiously congregating them about the gentleman's residence, and the farmer's home, formed thence a landscape scenery that seemed to be the work of nature herself, although to a certain extent

created by the hand of man. Throughout the Northern States, the style of disposing of the farm and materials of a country residence, as also the suburban cottages and grounds of the laboring classes, and particularly the home of the farmer and the mansions of the wealthy, have been greatly improved within a few years past; the most rugged and undulating surface of ground having the preference, and improved to such natural slopes as are best calculated to produce variety and grace. On the most commanding is usually placed the home, supporting it by shrubberies on the sides and in the rear, through which walks are conducted so as to be immersed in shades, and occasionally opening to the farm or landscape in favorable points: the road of approach traversing a considerable portion of the farm in its sinuous progress to the building, so as favorably to display the leading features of the surrounding scenery, until nearly approaching the residence, when it at once opens with a bold and striking magnificence.

On this important subject, "Downing's works" can not be consulted without benefit; they are also invaluable as a means of teaching how to look at nature and comprehend its beauties, for there are many persons who, never having directed their attention to such observances, their beauties convey no kind of intellectual gratification to them. When, however, the mind becomes familiar with the sources that produce these delights, and makes the observer no longer indifferent to the perfection of natural and ornamental scenery, every truth that tends to establish principles in the art, is received by him with interest, and if he be about to congregate round him a portion of the excellencies he has feelingly admired, he becomes anxious to do so with correctness and with taste; in doing this he has to avoid the errors of others, and also, those of his own prejudice, which perhaps present more effectual obstacles to his success.

Had I the ability, it is far from my intention to attempt a learned disquisition relative to the principles and theory of ornamental gardening and rural improvement, yet I would urge upon planters and others who have as yet thought but little on the subject, that a well laid out plantation, judiciously subdivided, (and the division and

boundary fences planted with a belt of evergreen and other shade trees, as a protection to the crops from bleak north winds, and as a protection and shelter to stock, who are well known to fatten most in sheltered situations,) improved farm buildings, interspersed with evergreen trees and plants, handsome approaches, a beautiful lawn and flower garden, not only enhance the elegancies and comforts of home, but they also in a ten fold ratio to the amount judiciously expended, add to the intrinsic value of the property; showing at the same time a cultivated imagination and sound judgment. Apropos, to this communication, *water* should always form a leading feature in all cottage, farm, and ornamental improvement, whenever suitable means can be had of employing it, whether as a source of irrigation or for ornamental and domestic purposes, with the aid of the hydraulic ram, from small streams and pipes, from other sources. This great desideratum can be obtained by almost every person, and often times in isolated situations, that otherwise would be comparatively valueless—as for instance, the well water at my summer residence on the eastern shore of Mobile bay, passing through strata of clay and alluvial soil, was found altogether unfit for domestic and culinary purposes; by digging, a small spring was found on the side of a hill, and distant from the house 1,960 feet, and at an elevation of twenty feet six inches. The spring was enclosed with posts and plank three feet square, and the outside carefully banked up with clay, to prevent the water percolating through the sand on the lower hill-side, after which, at the distance of twenty-two feet, was erected a plank reservoir seven feet square, connecting the top of the spring and reservoir by a three by four inch scantling, through the face of which a two inch groove was cut for the passage of the water, after which, with five hundred feet each of one and a quarter, one and three-quarters, and five-eighths of an inch light lead pipe, (manufactured in Philadelphia expressly for such purposes,) I set my negroes to digging a trench ranging from two and a half to four feet in depth, and eighteen inches on the surface, in which the conducting pipe was laid, beginning with the largest at the fountain, and gradually lessening the sizes. At the commencement, instead of introducing

the adjutage or end of the pipe directly into the side of the reservoir, as is usual, the main was made to pass entirely underneath the bottom, and the end, after being slightly opened in a tunnel-like form, raised up along the back part of the reservoir, above the level of the water, to admit atmosphere pressure behind the volume of water, as it entered into the top of the main, by a short pipe from the bottom of the reservoir, in front of which was placed a stop-cock to shut the water off for repairs, etc. From the adjutage of the main in the back yard, a hydrant is placed for ordinary use; also a half inch pipe introduced, which is carried up the casings of the back gallery of the dwelling house, giving a full supply of water for all purposes throughout the entire building, besides supplying a bathing-house, store and washroom, etc. From this point the main continues to the lawn in front of the residence, supplying a cast iron fountain, which, with its base, is ten feet high, discharging a regular jet of water during the entire day, seven feet high above its apex. By this means the water in the pipes is continually kept moving to prevent the accumulation of fixed air, and consequently oxidation of the pipes, the escape of water being retained in a large excavated basin surrounding the base of the fountain, and from which it gradually flows, irrigating the flower and vegetable garden, strawberry beds, etc. For simplicity, cheapness, and perfection, it is universally admired; and cost, including fountain, pipes, etc., etc., less than \$350. The introduction of pure spring water, as a matter of utility and economy, to say nothing in regard to the enhanced value of the property, I take to mean, working a considerable effect with small means. And, Messrs. Editors, should the plan be adopted, and found as beneficial in any other situation as I have proved it here, my object in making it public is at once fully attained. Respectfully, gentlemen, your obedient servant,

W. D'FOREST HOLLY.

—*Soil of the South.*

OAKLAND, May, 1853

ANTS.—To drive away ants, use sulphur steeped in water; if in the gravel walks, strew the gravel with salt, and then water it; this will apply also to worms.

**Spare the Birds.**

MEETING Dr. Kennicott the other day in that Paradise of birds where neither cat nor boy dare intrude—Professor Kirtland's garden—I was tempted to remind him of his plea for the birds, in the *Prairie Farmer*:

It has been said by one of our most learned writers, that insects annually destroy crops, in these United States, of the value of at least twenty millions of dollars, and this estimate is believed to be far below the reality, and except our hope of relief through meteorological or elemental influences, we have scarce any dependence for checking the increase of the countless swarms of destructive insects **SAVE THE BIRDS**, and the few predaceous insects themselves; and these latter we are full as apt to sacrifice to our ignorance, as we are the birds in our mistaken prejudice.

That most of our small birds feed largely on insects, is beyond dispute; and that just about in proportion to the decrease of birds has been the increase of our insect enemies, many have asserted, and those best informed fully believe.

In evidence of this let us watch a pair of our smallest and most sociable and confiding birds—the common wren—and see how often and how loaded with insect carcases they arrive at the nest. See, too, the heavy burden of worms which the blackbird, following the furrow, bears to his greedy offspring. And yet, on some silly pretence, you suffer your boys to break up the nest of the chatterer, and you remorselessly shoot down the poor blackbird, because, forsooth, he helps himself to a little corn, when you have neglected turning up grubs for him; and that, too, when he has preserved a hundred times the value, and many more times the quantity his pressing wants have made him appropriate.

We have little or nothing to say against shooting the wild pigeon; he visits the farm with an evident felonious purpose. The winged hawks eat small birds as well as mice, and we therefore leave them to their fate. The cedar bird is very annoying in cherry time, and a few charges of small shot may not be out of place in giving them notice to quit. The red headed woodpecker, the blue jay, and even that gentle warbler, the robin, have occasionally vexed us beyond

bearing by their petty thefts in the fruit garden and orchard, and we have been tempted to treat them unjustly. For though these birds love all fruits in their season and out, and the two former greatly delight in scooping out the inside of the tenderest apples, yet we have fully satisfied ourselves that these birds *do* earn their wages—ten times over. And we have not the least question, from actual experience, that if the farmer will set the plow agoing, the moment his corn is up, the blackbird will follow the new furrow, and gather up heaps of noxious grubs, instead of following the corn row, to pull for the soft kernel at the base of the plant, and which is by no means so desirable a blackbird delicacy as would be a juicy cut-worm, or a large fat grub—the larvæ of some dangerous insect.

It has been admitted by practical farmers that it will pay well to set a man at work to collect the cut-worms in the hills of corn; and it will most certainly pay to employ men to destroy rose bugs, caterpillars, borers, curculios, etc., etc., in the garden and orchard. In fact, if we dispense with birds, hand-picking is our only alternative in most cases. And will any one venture to say that a few nests of birds will not prove more efficient than the labors of a man, and come much cheaper, too? Nature has given the bird perceptive faculties in connection with this insect-killing vocation, never equalled by man; and then the bird labors for his own family's sustenance, and works with a will as well as an "instinct."

There is no mistake about it; birds *are* the horticulturists best friends, and he can better dispense with the labors of animals than he can spare the help of birds—and to the farmer they are equally necessary and much less annoying.

And yet birds are still wantonly destroyed, or are victims to our ignorance of their worth, and prejudices against some of their venial acts. There have even been laws enacted for their destruction within our time; and our Pilgrim fathers, we believe, exacted a tax of so many birds heads of every citizen. And to this day the most useful birds die, as did the Salem witches, the victims of a delusion, or a prejudice made powerful by time and old custom.

It is very easy to secure the services of birds; plenty of low trees, thick shrubs,

hedges, etc., but really the least objectionable will readily appear only when you *construct houses for them*; such are the martins, swallows, blue birds, wrens, etc., and these are among the most useful of our birds.

There is yet another aspect in which to view this subject—in connection with the grace and beauty of the feathered tribe, their social and confiding habits, conjugal

fidelity and care for their young, and many more amiable traits, from which man might well take lessons while enjoying their delightful society.

Spare the birds, good friends, and provide fitting homes for them, and grudge them not a morsel of food from the stores they help to save from insect enemies.



## The Garden.

### THE RHODODENDRON.

DR. WARDER:—At last, my *Rhododendron maximum* has come into bloom, with its *twenty-one* bunches or clusters of flowers, and the display is fine. I was surprised, however, at the tardiness of their opening. Warm weather came, and continued; the twigs without knobs grew and lengthened several inches; the leaves expanded, and nearly acquired their full size, while the flower-buds remained dormant from last year fully into the present summer.

The blossoms are nearly white, with only a slight blush. Now three varieties of this species are mentioned: pink, (or rosy,) white, and purple; and Pursh speaks of their habitats and time of flowering as follows: first: "In the mountain near rivulets and lakes, from Canada to Carolina; June, July." Second: "In shady cedar swamps of New Jersey and Delaware; July, August." Third: "On the highest mountains of Virginia and Carolina, near lakes; May, June." He says, the last sort "grows to an immense size—often eighteen inches or more

in diameter, and its foliage triple the size of any other species."

The Rhododendron prefers a damp or wet soil, and, as mine stands in *laurel earth* taken from the brink of a deep ravine, it rather suffers from want of moisture. (O for a tiny rill!) In a wild state, it generally grows under the dark shade of evergreens, where its white flowers appear to the greatest advantage. Unfavorably, mine have only a board fence on the south to protect them from the sun, and where the rays can not reach them, they are more delicate, beautiful and enduring. The florist who intends to cultivate these elegant shrubs, would do well to prepare accordingly.

Duration is an item of some importance in the selection of flowering trees and shrubs. Thus the double flowering cherry, though beautiful as a rose, is fugacious in comparison with the Redbud or *Cercis*. Our Rhododendron will probably continue in bloom three weeks, if not longer. D. T.

6th mo. 25, 1853.

### Propagating Tender Plants.

THIS chapter, without embracing all points of an interesting subject, and which, before long, will be engaging great attention, is written solely to meet the inquiries made, and the explanations that have lately been deemed necessary. The following questions will not only embrace the wants of correspondents, but I hope may be interesting to new beginners in general :

1st. "*Is air to be admitted to fresh-made and newly-planted cuttings placed in cold frames?*" We frequently receive many questions, evidently from intelligent people, well versant with the principles of some of the exact sciences. They are accustomed to see some one primary principle regulating the whole routine of practical detail, and becoming somewhat enthusiastic in gardening, they very judiciously wish so far to see their way, as to be able to refer to a definite principle as the basis on which their operations are to be founded. These are the people that, if they persevere, will ultimately make the most successful gardeners. But, trusting too much to any one general principle, such people are too apt to "*give up*" from a disappointment, just because, though a principle be sound, the modes of its application *may* be, and *must* be, as varied as the nature, the habits, and the circumstances of the plants to which they are applied. Hence, as a general principle, it may be stated, that for growing cuttings with their foliage on, or even partly reduced, a minimum of air, and either shaded or diffused light, are necessary, just because a current of air and exposure to light would rob the cutting of its juices, on the saving of which the future processes of rooting and growing depend. On one hand, therefore, the more successful you are in keeping your cuttings from flagging, by checking the air and light, the sooner will roots be formed; but, on the other hand, you may keep so close in a moist atmosphere, may shade so well from the sun, or place the cuttings at such a distance from the glass, that the material of your cuttings will be exhausted in upward growth, and thus you may either get no roots at all, or, very likely, be rewarded with a sickly, drawn, leggy young plant. While closeness and diffused light are thus generally indispensable at first, it is no less necessary to give the cuttings air and light as soon as they can

bear it. No royal rule can here be given; every case must be regulated according to its peculiar circumstances. For instance, *here* are succulents, such as *Cereus*, *Mesembryanthemum*, *Crassula*, etc.; who would think of keeping them shut out from air by placing a bell-glass over them? Roots, in their case, will generally be formed long before air and sun combined have taken away, by evaporation, the stored-up juices. *There* are *Geraniums* and *Pelargoniums*, which will strike as well in the open air in July, as they would do with all the paraphernalia of lights and shading. But try a *Heath*, or an *Epacris*, or a *Choroesea*, by such means, and you may wait, and cry until you were hoarse for a plant to come. Then, the same plants, as respects the cuttings from them, require different treatment at different times. The ripening shoot in the autumn will stand more air, and rougher treatment, than the soft, spongy, watery shoot in the spring. In the one case, growth is being *arrested*; in the other, it is being *excited*. Apply, in the first case, and at once, such stimulus as a warm, close, shaded atmosphere, and in many cases you will get shanked cuttings and rotten tissues for your reward. Apply such excitements when growth is progressing, in spring, and with the extra care for securing a close atmosphere and a diffused light, you will be paid in obtaining plants in a seventh part of the time you would do in the autumn. Two general rules may, therefore, be deduced from a primary principle. First: Do not hurry cuttings inserted in *autumn*; let them have time, and as much air and light as they will stand without flagging. Second: Never allow cuttings, inserted in *spring*, or early summer, to receive a check if you can prevent it. In their case, little or no air should be given during the day, until roots are produced, and then it must be given at first in small quantities. Cuttings, as well as plants, must have their atmosphere changed at times. For preserving healthy robustness, and warding off insidious damps, I have long practised, and recommended giving cutting a little air at night, less or more, according to circumstances.

2d. "*What is the use of bell-glasses?*" Is it to keep out the air? Would not a common frame answer the same purpose? A certain work says, after once placing them

on the cuttings, "*wipe them out every morning.*" Is not this to remove damp; and would not wiping off the condensed moisture, on the inside of a cold frame, so as to prevent the moisture falling, answer a similar purpose? Or might not air be admitted for a quarter of an hour to dry it up? and if so, what need of these expensive bell-glasses, especially when we have little enough to spend on such *matters*? Now, some of these very matters puzzled my own brains more than twenty years ago, when there was no Cottage Gardener to resolve a doubt, but when we were left to arrive at principles and theories through the stern teachings of facts. Our correspondent, with commendable zeal, tells us, that he "*likes to understand, and go through with everything he undertakes.*" There is no want in his inquiries, and that of others that have reached me, on the same subject, but that of *definiteness*. The question of *cuttings* is too general. Different plants require different treatment. Ten to one but the plants our friend has in his eye require no such things as bell-glasses. But that is no conclusive argument against their use. I thought myself wondrous clever when I got cuttings to root in plenty, in my father's window, by adopting the simple plan of setting the pots on the floor during sunshine; and I deemed myself of still more importance when, in the shady borders of green-houses and forcing-houses, I got plants to root as if it were at my bidding. I did not find myself to be a perfect novice until I tried hard-wooded and difficult plants; and then, so crestfallen was I, that even such a simple thing as a hand-light, full of rooted pink pipings, gave me something like relief, because then the first dim perceptions of the principles of propagating by cuttings passed through my mind.

However we gentlemen's gardeners may either blunder, or stick to old customs just because they are "*ancient ways,*" we may rest assured, that there is reason for the processes employed, so long as shrewd tradesmen, that must meet the competition of the market, adopt them. About twenty years ago, I noticed the finest sight of struck and striking hard-wooded cuttings I ever beheld; and, as not very long since I saw a similar plan successfully adopted, it may be profitable to detail it *here*. The house was

a wide lean-to, with a pit in the middle and shelves all round. The pit was filled with tan and sand, so as to give out a steady mild heat of about 70°. The plants, Heaths, Epacris, etc., had been slightly excited before the short cuttings were taken off; the pots had been more than three parts filled with drainage, then a little sandy-peat, covered with an inch of silver-sand, and well watered. When dry and firm, the cuttings were inserted and watered, when the tops were dry the pots were plunged for three parts of their depth in the pit, each covered firmly with a bell-glass, and then the sashes of the pit put on. You will observe that here there were three thicknesses of glass: the roof of the house, the sash of the pit, and the bell-glass; and, notwithstanding the diffusion of light from passing these mediums, a slight shading was wanted in bright days. The following were the circumstances in which I found them. Some lights were close shut, and the bell-glasses beneath them close over the plants; beneath, other lights also close, many of the bell-glasses were raised a little on one side, because rooting was progressing; in others, farther advanced, the glasses were removed, but the sashes were close; while in others, the bell-glasses were not only removed, but there was an inch of air at the top of the light. In looking round me, I saw others standing with a great deal of air under hand lights, and others, on open shelves, hardening off for potting. Now, I by no means say that such things could not be struck without all this attention and bell-glass management, but I question if many other modes would be more *certain, expeditious, and economical*. With these general remarks, I proceed to make a few running notes on our correspondent's inquiries and deductions.

1. "*The great expense of bell-glasses to amateurs.*" I think they are the cheapest agents he can employ; a dozen of them, from four to six inches in diameter, may be got for about a crown, provided there is only one or two of the last size. Now, without saying anything of the expense of a frame, it is not likely it will be always devoted to propagating purposes; it most likely will have another crop during the season; but it is very probable, that now and then some cuttings of desirable things may

come in his way ; and then, if what we have said of air, etc., be true, the cuttings could not receive justice in the frame, and the main crop in it too. Now, in such a case, a bell-glass comes to our aid ; for, if we even put the cuttings in the frame, by means of the bell-glass we can give the cuttings any degree of shade, of closeness or openness we require. Half-a-dozen, even, of such utensils would open up a large field for experiment. A good substitute would be to insert the cuttings in a small pot, and then set it inside a larger one, so that the tops of the cuttings are below its rim, and over that to place a square of glass that would cover the mouth of the pot. Turning the glass every day would prevent damping from condensed moisture dropping.

2d. "*The use of the bell-glass.*" This is not merely to keep the cuttings from the exhausting effects of a free current of air, but also to prevent the evaporation of their juices, by surrounding them with an atmosphere more or less saturated with moisture. Every leaf and green part of a cutting, previous to its being taken from its parent plant, performed perspiring, elaborating, and assimilating agencies. These were sustained by the reciprocal action going on between branches and roots. The first thing we do is to destroy that connection when we remove the cutting. Our next object should be to preserve the cutting as it is ; to place it in circumstances in which it shall not be allowed to perspire more than it can absorb. Assimilation must, therefore, take place slowly, and thus we give light and air in proportion as the cuttings are forming a callus, or roots. Now, with bell-glasses, we could give every pot in a propagating frame its distinctive necessary treatment, which we can not do without, because, in difficult cases, when we either shade or gave air to certain cuttings, we run the risk of injuring others.

3d. "*Wiping bell-glasses every morning, or wiping the inside of a cold-frame to prevent the dropping of condensed moisture.*" Now here, in the first place, in all tender and difficult cases, the exposure necessary on wiping a frame would be injurious. Besides, unless in cold nights, in autumn and spring, there would be little condensed moisture, which will always be in proportion to the moisture within, and the difference between the internal and external atmosphere. In

all common soft-wooded plants, the leaving a little air on at night, or for a short time in the morning, will be sufficient. The wiping of bell-glasses did use to be a serious affair ; but I have repeatedly shown how that trouble may be next to altogether abolished, by using *conical* instead of *flat-headed* glasses. In the latter case the drops would fall on the cuttings ; in the former it would trickle down into the soil. By using double pots, placing the cuttings in the inner one, and the glass between the inner and outer, I have frequently struck tender things, that after being first watered, never had the glass moved until it was seen the cuttings were fairly growing, and that, too, when from first to last they had enjoyed a fair amount of sunshine. Not now to speak of the slow decomposition going on in such circumstances, it will at once be evident that the moisture raised by heat during the day, placed the cuttings in an atmosphere in which they were forced to absorb as well as perspire. The cold of night condensed that moisture, and returned it to the soil, just ready to be brought up again the following day by a something like perpetual-motion process.

4th. "*Allowing that bell-glasses are not essential for tender and hard-wooded plants, and a useful auxiliary for solitary instances of experiments and propagation, may they not be done without in the case of soft-wooded greenhouse plants, and those now generally employed for summer decoration, for baskets, and flower gardens?*" Yes, especially if propagation is confined to two periods—early in autumn or in spring. In the first case, they should be kept cool. In the second case, they will rejoice in the excitement of a slight hot-bed. In the one case, a result is obtained with a minimum of care, at the expense of a maximum of time. In the other, time is gained, but care and attention are increased. In both cases, I prefer diffused to shaded light. If placed two or three feet from the glass, little or no shading will be necessary ; but these matters have already occupied attention.

5th. "*How many leaves should be left on cuttings?*" This must depend upon whether they are large or small, and the lesser or greater means at your disposal for preventing them exhausting the cutting by evaporation. I have had cuttings root quicker

with all their leaves on than those partly mutilated; but then they were placed in circumstances that nurtured and stimulated the vital energies. A medium path is generally the safest. When the leaves are large, it is best to reduce them, and thus lessen the perspiring, evaporating surface, but no general rule can be given. In autumn it is advisable to cut a joint, removing the leaves there, and either taking away or shortening a few above; but in spring, with the assistance of a slight hot-bed, there are many things, such as Verbenas and Calceolarias, that we would consider it a waste of time to cut to a joint or remove a leaf; but the vital forces are in a different condition then from what they are in autumn.

6th. "*What temperature should we give cuttings?*" In autumn it should little exceed that in which the plant stood. In spring it will always be advisable to raise it a few degrees. This holds equally true of tender or stove plants. Hence the ease with which such strike generally in a hot-bed under a bell-glass. When autumn-planted cuttings are long in rooting, they may receive a stimulus by heat at their base when they have swelled or callused there.

7th. "*How should I water cuttings?*" This is a matter of great importance. Let the utensils and materials be well soaked and drained before the cuttings are inserted, and water so as to make firm and fill every cranny on the surface. After that, I prefer *dew*ing the cuttings instead of soaking the soil. This is particularly necessary in autumn-struck cuttings, if you would save them from damping in winter. Such plants, even when rooted, and you give them all the air you can in dull, foggy weather, will flag when a bright sunny day comes, even when they are moist enough at the roots, just because both leaves and roots have been enervated by the want of sunlight. In such cases, soaking away at the roots will only be the precursor of future cares, if not total disappointment. A slight *dew*ing of the foliage, taking away the air, and, in extreme cases, a slight shading, are the proper remedies until the plants get used to the change.

Here I must stop, and my apology for the length of the article must be the fact, that the matters alluded to will, ere long, be engaging the practical attention of our readers.  
—Cottage Gardener.

R. FISH.

### The Ferns.

THOUGH this class of plants has no floral charms, yet they possess an elegant beauty peculiarly their own. The leaves, or, as they are called, their *fronds*, have, in most cases, a light feathery appearance that is exceedingly pleasing, and the green of every shade on these plants is remarkably fresh and tender. Some of them, as the Gold and Silver Ferns, are not to be despised even for that quality florists so much admire—color. The Golden Fern (*Gymnogramma chrysophylla*) has the under sides of its leaves of a fine bright orange, or golden color, which always strikes the spectator with unexpected pleasure; and the Silver Fern (*Gymnogramma tartarica*) is equally beautiful, or even more so, from the clear pure white of its spores, or bundles of seed, on the under side of the leaf. There is, indeed, such an elaborate and minute finish in this interesting tribe of plants, displaying such wondrous attention and power by the Divine Architect of all things, that the mind of any human being must be in a deplorable state that does not feel pleasurable and grateful emotions on viewing these, comparatively speaking, humble adornments of our happy world—for "it is a happy world, after all." Many a borky dell—many an exposed rock—would lose its attractive charms without these charming plants.

Then their geographical distribution is most remarkable. They clothe the Alpine rocks of the temperate portions of the globe, and ornament the thickets and jungles of the torrid zone. They flourish in wet bogs, and grow plentifully on dry hedge banks. They grow in the hottest, and almost the coldest, portions of the globe, clothing what, in their absence, would be the dreariest waste.

Every country yet discovered has its Ferns. In some they attain a considerable magnitude, approaching almost to the size of timber trees. So large, indeed, are they, especially in New Zealand, as to acquire the name of *Tree Ferns*; while in other instances, they are so small that a single plant does not occupy above an inch in space even when fully grown.

This large distribution over the world brings them within the power of every one possessing the smallest garden, a short dis-



tance from large, smoky towns, to cultivate them; and I am happy to find a large number of admirers of plants are growing, and commencing to grow, them in various parts of the civilized world. The cultivator of Ferns shows that the love of plants is strong within him; for, as may be truly observed, they are not so showy and attractive as many other plants, their beauty being of a different order; but there is this advantage about them, that they may be grown where few other plants will thrive, only taking care to plant suitable species for any peculiar position. This information I shall particularly endeavor to impart through this essay.

I scarcely need mention, that a Fern, whose natural home is in shady, damp places, would not exist if planted on a fully-exposed, dry situation; neither would such species as are found in the clefts of the rugged rocks succeed if planted in a close, damp place. It is the want of a due attention to the various habitats where Ferns grow wild that many species die when attempted to be grown on quite different situations and soils.

It is a remarkable fact, that there are no Ferns from warm countries that will thrive well in the open air of this country, even in summer; while many of our British Ferns will grow prodigiously in our hot-houses. There is one Fern, *Asplenium marinum*, found on rocks on the shores of this country, that will not grow well inland, unless it is grown, at least, in a greenhouse, and in the stove it flourishes with a luxuriousness never seen in its most favorable native locality. I have seen fronds of this fine Fern, in the stove conservatory, at Sion House, fully two feet long, while in the open air it seldom exceeds more than six inches. One more instance may be given in the *Adiantum capillus veneris*. This species may be seen at most of the Metropolitan exhibitions, in ten-inch pots, a complete bush, more than a foot in diameter, and nearly as high; while in its wild state it seldom exceeds four or five inches across, and two or three inches high. It is a knowledge of these peculiarities that enables the cultivator to produce specimens far superior, both in size and beauty, to such as are produced naturally. These instances of complete success in cultivating these charming plants are suffi-

ciently encouraging, and I am tempted to quote a proverb for the purpose of stimulating Fern growers, and it is this—"What one man has done another may do."—T. APPLEBY, in *Cottage Gardener*.

#### The Fuchsia.

MR. SHEPHERD, the respectable and well-informed conservator of the Botanic Gardens, at Liverpool, gives the following curious account of the introduction of that elegant little flowering shrub, the Fuchsia, into our English greenhouses and parlor windows. Old Mr. Lee, a nurseryman and gardener, near London, well known fifty or sixty years ago, was one day showing his variegated treasures to a friend, who suddenly turned to him and declared "Well, you have not in your collection a prettier flower than I saw this morning at Wapping." No! and pray what was this phoenix like? "Why, the plant was elegant, and the flowers hung in rows, like tassels, from the pendent branches; their color, the richest crimson, in the center a fold of deep purple," etc. Particular directions being demanded and given, Mr. Lee posted off to Wapping, where he at once perceived that the plant was new in this part of the world. He saw and admired. Entering the house he said, "My good woman, this is a nice plant; I should like to buy it." "Ah, sir, I could not sell it for no money, for it was brought to me from the West Indies by my husband, who has now left again, and I must keep it for his sake." "But I must have it." "No, sir." "Here, (emptying his pocket) here are gold, silver, copper," (his stock was something more than eight guineas.) "Well-a-day, but this a power of money, sure and sure." "'Tis yours, and the plant is mine, and, my good dame, you shall have one of the first young ones I rear, to keep for your husband's sake." "Alack, Alack!" "You shall, I say, by Jove." A coach was called, in which was safely deposited our florist and his seemingly dear purchase. His first work was to pull off and utterly destroy every vestige of blossom and blossom-bud; it was divided into cuttings, which were forced in bark-beds and hot-beds, and re-divided and sub-divided. Every effort was used to multiply the plant. By the commencement of the next

flowering season Mr. Lee was the delighted possessor of three hundred Fuchsia plants, all giving promise of blossom. The two which opened first were removed into his show house. A lady came. "Why, Mr. Lee, my dear Mr. Lee, where did you get this charming flower?" "Hem! 'tis a new thing, my lady. Pretty, is it not?" "Pretty! 'tis lovely! Its price?" "A guinea; thank your ladyship;" and one of the two plants stood proudly in her ladyship's boudoir. "My dear Charlotte, where did you get it?" etc. "Oh, 'tis a new thing. I saw it at old Lee's. Pretty, is it not?" "Pretty! 'tis beautiful! Its price?" "A guinea. There was another left." The visitor's horses smoked off to the suburb; a third flowering plant stood on the spot whence the first had been taken. The second guinea was paid, and the second chosen fuchsia adorned the drawing-room of her second ladyship. The scene was repeated as new-comers saw, and were attracted by the beauty of the plant. New chariots flew to the gates of old Lee's nursery-ground. Two fuchsias, young, graceful, and bursting into healthy flower, were constantly seen on the same spot in his repository.

He neglected not to gladden the faithful sailor's wife by the promised gift, but ere the flower season closed three hundred golden guineas clinked in his purse, the produce of the single shrub of the widow of Wapping; the reward of the taste, decision, skill and perseverance of old Mr. Lee.

The above is not presented as new, but is an interesting narrative which was sent from a distance by a kind contributor who desired to spare my eyes.—Ed.

#### The History and Culture of the Mignonette.

It is now an age since this fragrant weed of Egypt first perfumed the European gardens, and it is so far climated, as to spring from seed of its own sowings. The *Reseda Odorata* first found its way to the south of France, where it was welcomed by the name of *Mignonette*, (Little Darling,) which was found too appropriate for this sweet little flower to be ever afterwards exchanged for any other. By a manuscript note in the

library of the late Sir Joseph Banks, it appears that the seed of the Mignonette was sent, in 1742, by Lord Bateman, from the Royal Garden at Paris, to Mr. Richard Bateman, at Old Windsor; but we should presume that this seed was not dispersed, and perhaps not cultivated beyond Mr. Bateman's garden, as we find that Mr. Miller received the seed from Dr. Adrian Von Royen, of Leyden, and cultivated it in the Botanic Garden at Chelsea, in the year 1752. From Chelsea it soon spread into the gardens of the London florists, so as to enable them to supply the metropolis with plants to furnish out the balconies,—a fact noticed by Cowper, who attained the age of twenty-one in the year that this flower first perfumed the British atmosphere by its fragrance. The author of the *Task* soon afterward celebrates it as a favorite plant in London—

"——the sashes fronted with a range  
Of orange, myrtle, or the fragrant weed."

The odor which this little flower exhales is thought by some to be too powerful for the house; but even those persons, we presume, must be delighted with the fragrance which it throws from the balconies into the streets, giving something like a breath of garden air to the "close pent man," whose avocations will not permit a ramble beyond the squares of the fashionable part of the town. To such persons, it must be a luxurious treat to catch a few ambrosial gales on a summer evening, from the heated pavement where offensive odors are but too frequently met with. We have often found the perfume of the mignonette so powerful, in some of the better streets, that we have considered it sufficient to protect the inhabitants from those effluvia that bring disorders with them in the air. This genius of plants, of which there are a good many species, was named *Reseda*, by the ancients, from *resedare*, to *assuage*, because some of the species were esteemed good for mitigating pain.

We find that this sweet *Reseda* has crept into the armorial bearings of an illustrious family of Saxony, by the following romantic tale: The Count of Walstheim was the declared lover and intended spouse of Amelia de Nordbourg, a young lady possessing all the charms necessary for the heroine of a modern novel, except that she took delight in creating little jealousies in the breast of

her destined husband. As the beautiful Amelia was an only child of a widowed mother, a female cousin, possessing but few personal charms, and still less fortune, had been brought up with her from infancy as a companion, and as a stimulus to her education. The amiable and humble Charlotte was too insignificant to attract much attention in the circles in which her gay cousin shone with so much splendor, which gave her frequent opportunities of dispensing a part of that instruction she had received on the more humble class of her own sex. Returning from one of those charitable visits, and entering the gay saloon of her aunt, where her entry or exit was now scarcely noticed, she found the party amused in selecting flowers, while the Count and the other beaux were to make verses on the choice of each of the ladies. Charlotte was desired to make her selection of a flower. The sprightly Amelia had taken a rose, others a carnation, a lily, or the flower most likely to call forth compliment; and the delicate idea of Charlotte in selecting the most humble flower, by placing a sprig of Mignonette in her bosom, would probably have passed unnoticed, had not the flirtation of her gay cousin with a dashing colonel, who was more celebrated for his conquests in the drawing-room than in the field of battle, attracted the notice of the Count, so as to make his uneasiness visible, which the amiable Charlotte, ever studious of Amelia's real happiness, wished to amuse, and, to call back the mind of her cousin, demanded the verses for the rose. The Count saw this affectionate trait in Charlotte's conduct, took out his pencil and wrote for the rose,

*"Elle ne vit qu'un jour, et ne plaît qu'un moment."*

which he gave to the lovely daughter, at the same time presenting the humble cousin with this line on the Mignonette:

*"Vos qualites surpassant vos charmes"*

Amelia's pride was aroused, and she retaliated by her attention to the colonel and neglect of the count, which she carried so far as to throw herself into the power of a profligate who brought her to ruin. The count transferred his affections from beauty to amiability, and, rejoicing in the exchange, and as well to commemorate the event which brought about his happiness and delivered him from a coquette, he added a branch of

the sweet *Roseda* to the ancient arms of his family, with the motto,

*Your qualities surpass your charms.*

The Mignonette is transformed into a perennial shrub, which dispenses its odors at all seasons of the year, by the following simple treatment: A young plant should be placed in a garden-pot, with a stick of about eighteen inches in height inserted by its side to tie up its branches to; as it advances in height, the leaves and young branches being kept stripped off from the lower part, so as to form a stem to the height required, this stem will become sufficiently hard and woody to endure the winter, by being placed in a greenhouse or the window of a sitting-room, and may be preserved for several years, if air is given to it whenever the weather will allow, so that the young branches do not become too delicate. As soon as the seed vessels begin to form, they should be cut off, which will cause the plant to throw out a fresh supply of blossoms; but these plants should never be suffered to perfect their seeds, as it would greatly weaken them, and generally cause their entire decay; for the sweet *Roseda* is an annual in its proper climate, and therefore naturally decays when it has ripened its seed. It is frequently observed that the seeds of the Mignonette which scattered themselves in the autumn, produce finer plants than those that are sown in the spring, which should teach us to sow a part of our seed at that season of the year in pots or boxes, kept in frames through the winter, or in a greenhouse.—*Jour. of Agriculture.*

#### Watering—Its Uses and Abuses.

It has been often and truly said, that our best directed efforts at mixing and preparing the various composts which many plants require, often come short of the "natural material" it is intended to imitate. So nicely does nature mix and balance her ingredients, that our crude mass of discordant substances forms a poor substitute for the real soil itself; and even our best agricultural chemists acknowledge their inability to compound a material combining all the fertilizing qualities of a good alluvial loam in anything like such a good condition as the same compound is to be found in many situations, "ready mixed and prepared for

use." So difficult is it to confine all the volatile substances of which a handful of dirt is said to be composed, that the late Mr. Rham, than whom it would be difficult to find a higher authority, admitted the possibility of some of the most important agents to fertility escaping while being subjected to analysis, so as to have a false conclusion founded upon those remaining.

Be this as it may, it is not my purpose to inquire; but I deem it right to mention it, as having some analogy with another subject to which this chapter is devoted—I mean, the application of *water* to plants, as the agent for supplying them with the food of which they are supposed to be in need; and how far we may be mistaken in our idea of such food. As the present season is one in which the water-pot is put as much in requisition as any other, it behooves us to be careful in using an agent so critical; for though it can not but be admitted that much good results from its use in many cases, yet there are others where a positive harm may take place from its misapplication, and of this it is my interest to warn the inexperienced.

As water enters very largely into the composition of everything having vegetable life, and more especially so with those of a culinary or edible kind, it is important that no lack of that necessary agent be allowed to check the growth, or frustrate the purposes of the intended vegetable. Then comes the question, what can we do to administer to its wants? Pouring on a deluge of water at a time when the other agents in connection with that fluid are either dormant, or otherwise incapable of performing the functions assigned them, must evidently be bad policy; for, besides the plants being injured by the application of water, very often of an improper kind, that genial moisture which rain imparts to the atmosphere can never be tendered them by any out-door application. When watering is performed under unclouded sunshine, or dry, withering winds, the evils above are sure to happen; besides which, it is much aggravated when water of an improper kind is used. We all know that rain-water, by its being for some time suspended in the atmosphere, becomes so thoroughly charged with it, that it carries to the ground certain portions of the air it has become possessed

of, consequently, such aerified water is bulk for bulk lighter than ordinary well-water, and at the same time it is divested of many of those component parts which well-water is impregnated with.

Now, though some description of well-water may be what is called "more agreeable to our palate," for what little we require of it, still, the water contains within itself the elements of death to plants; and though it rarely happens that such an event occurs, yet its prevention is more due to the counteracting powers of the soil, etc., than to any merit in the liquid used; for, besides the fact of well-water being several degrees colder than rain, or pond-water, and so acting as "a retarder," it is likewise hurtful from the pernicious matter it contains; drawn from a greater or less depth, it is sure to be more or less impregnated with the substances it has been in contact with, which are often of a kind highly injurious to vegetation, if not absolutely poisonous.

It would be wrong in us to affirm that a plant in a pot, languishing for liquid food, would be better without such water than with it; yet, something might be done to secure the use of better, or, it may be, remedy that which is the only supply. Hard well-water is much modified by exposure to the atmosphere; therefore, ponds, basins, or troughs, are used to give it the necessary exposure, and all three appliances must be adopted where much has to be done by water of the kind mentioned above. This, however, is not always thus effected; for it sometimes happens that rain-water absolutely turns hard in a tank; and that of some ponds is equally so, though deriving their supply from the same source. The reasons in both are the same; some ingredient in the composition of the tank, or in the bottom of the pond, imparts that noxious principle to the water, which, under the vague, but not improper, name of "hard," we give to water that such substances as soap will not readily dissolve in. We have seen a tank turn all the water hard that entered it for many months; but then it was the rawness of the mortar, and other materials which it imbibed, that caused it to be so, added, perhaps, to some similar saline bodies it received from the roofs that collected it. Pond-water may be hard from the same cause, i. e., the mud, or material

at the bottom might have the effect of turning it so ; or it might have drained from ground that imparted that property to it. There are many descriptions of soil that will cause this, as may be known by the hardness of certain streams ; and if proof were necessary of the evil effects of such streams or ponds, it is only necessary to look at the vegetables which clothe their banks—a slight comparison will tell which of the two is most relished by the plants which delight in such places ; we mean, plants that grow in shallow water, and on the edges of rivers. Where well-water must, of necessity, be used, limit the quantity to the least that can possibly serve the purpose, and this may be done with out-door plants to a much greater extent than is often expected, for plants so growing are not so much hand-fed as those in pots, or some similarly confined quarter.

We may next observe, that all "over-watering" is bad, especially when done with cold water of an improper kind ; and whatever may be the difficulties in obtaining fine soft water, these difficulties had better be encountered than trust the well-being of valuable plants to the tender mercies of a fluid strongly impregnated with some mineral substance, better calculated to destroy insects than impart fertility to the soil ; and though the addition of chemical ingredients will change hard water so as to be available for culinary or laundry uses, yet we question very much whether soda, and its kindred substances, can be said to divert the mixture of its pernicious quality by adding its own influence to the compound. This mixture of opposing elements may serve the chemical purpose of washing, but to render water more fit for plants, a less mechanical action must be adopted, and "time," that never-failing agent, will accomplish the task better than the forcible means concocted in the laboratory of the man of science. We advise the young gardener, who has only a deep pump to run to for every drop of water he wants for his plants, to prepare a basin or pond large enough for, at least, a week's supply ; this, by being kept filled, and allowed to stand exposed to the air and sun, will speedily become divested of some of those properties so much at variance with good culture ; and though it is not likely to be so good as rain-

water, yet it is better after such an exposure than it was before, and consequently, may be used with more freedom.

In the application of *water to beds for seedlings*, take especial care not to do it until you feel satisfied the plants can no longer do without it, unless at a sacrifice to themselves ; to begin watering immediately, the sun dries the upper surface of the ground, is bad in the extreme, and sure to lead to bad consequences. After a period of moist weather, it is some time ere watering need be practised, for though the plants may be young, and not deep-rooted, yet if the soil be loose below them, (as we expect it to be,) the sun's action will bring up sufficient moisture from below to meet all the wants of the roots, and though the top portion will keep drying up deeper and deeper every day, yet the descending root will, in all vegetation, keep pace with it, and in its search for moisture, will penetrate deeper and deeper, until it feels less effects from sunshine, and consequently, cease to show its influence. In opposition to this grand natural principle, is the dribbling system of supplying moisture by artificial means, or the equally reprehensible way of over-doing it, by regular and systematic drenchings. The latter mode, by cooling the ground, retards the vegetation in a manner something like a human being having their lower extremities immersed in cold water all day, while the dribble system, by falsely tempting the roots of the plant to remain near the top, exposes them to those sudden changes of drought and moisture so fatal to their welfare, and, probably, the neglect of, giving them their food at the stated time, may be at the expense of their lives, supposing the dry weather to continue, and the dribbling system to have diverted their principal roots to near the top, so as to take the advantage of the little moisture supplied, besides which, frequently watering the ground hardens and sours it, and unless means be taken to break it up, the sun soon bakes it into that unpleasant mass, so distasteful to vegetation as well as unsightly to look upon.

When, therefore, beds of seedlings must have water, let them have it, if possible, on a dull day ; and if the following one be a bright sunny one, shade them a little, by spreading some boughs over the beds, or by

some other contrivance, whereby the fiercer rays of sunshine will be arrested without the plants being much deprived of light; while some plants of a more robust character will be benefited by having a good watering; and, a few hours after, the ground may be stirred around them, in order to break that sealed-up surface which artificial watering so invariably assumes; added to this, some slight mulching, wet dung, or leafy matter, will arrest that evaporation which robs the ground of what has been so lately added.—J. Robson, in *Cottage Gardener*.

#### Phosphates in our Soils.

It is a principle of physiology, both of vegetable and animal life, that whatever is received as nourishment must, somewhere in its course, be brought to a state of solution, and it follows that substances perfectly insoluble are therefore perfectly inert. The old chemists had an adage to that effect—*"Corpora non agunt nisi sint soluta."* In case of the food of plants, this condition involves apparent difficulties; for if the food of plants in the soil be in a perfect state of solution, it will be ever liable to be washed away by rains, and will disappear before it can be made available to the plant by absorption.

The manner in which nature gets over this difficulty, is one of the most interesting points to be comprehended by the student of rational agriculture. Briefly, it is sufficient to say, that some of the nourishment of plants is derived from the air, in gaseous solution, by means of the leaves; while matters in the soil are gradually rendered soluble by the aid of sunshine, rain, air, etc., acting at and near the surface, and are thus furnished as they are needed; while the same substances, lying deeper buried under the soil, suffer no change until plowed up; hence the philosophy of sub-soil plowing. Two of the most important fertilizers are the least abundant, and are difficult of detection; these are, phosphoric acid and ammonia. The phosphates are very important fertilizers, especially for the cereal grains, as corn, wheat, etc.; hence the use of bone earth, while guano supplies ammonia. It is, therefore, no unimportant discovery, which I have lately made, that all of the rocks in the blue limestone region, extend-

ing in all directions from Cincinnati, from fifty to one hundred miles, contain phosphates. They exist in the blue clay marl, called "soapstone," as well as in the limestone petrified fossils. The phosphoric acid is combined with iron and with alumina, and these are mostly insoluble. But the presence of two manures, ammonia and sulphureted hydrogen, forms a soluble phosphate, that of ammonia. Now common stable manure furnishes both of these, the ammonia producing the pungent smell, and the sulphureted hydrogen the disgusting savor of rotten eggs. These substances are produced by all decomposing animal remains, and most abundantly from the carcasses of decomposing animals. It is singular that substances so disgusting to our senses should nevertheless contribute to the production of our bread.

It is probable that this combination of phosphates with the fossiliferous limestone, extends into the State of New York, and constitutes the fertilizer of the wheat growing regions generally, for it is well known that the best wheat lands are those in which there is a limestone gravel, generally fossiliferous. The very origin of the phosphates may have been with the petrified animals, for all animals contain them, and they are by no means perishable or liable to substitution.

JOHN LOCKE.

—*Cincinnati Gazette*.

#### Salads.

We can not say, with Shakespeare's rebel, "I think this word *SALLER* was born to do me good," but we can say, that an inquiry concerning it has suggested to us the gathering together some of our notes relative to a very seasonable subject. It is seasonable, because, in summer, few are they who do not give a hearty welcome to "the sa'd bowl;" and it is seasonable, because the Horticultural Society has, at length, been led back to its prime object—utility—and shows its return to good sense by offering prizes for "The best collection of salad plants." "Why does Evelyn call them *Acetareous* plants?" is the query that has led us to the subject. "It is not from *acetum*, vinegar," adds our interrogator, "because such plants usually are called *acedaria*, in the classics."

With submission, we entertain a contrary

opinion. The best authorities, and the best editions of these authorities, are uniformly contrary to our correspondent's assertion. We have before us one of the best editions of Pliny, and there (lib. xix, c. 4,) we have it, "*unde et acetaria appellantur.*" The whole passage is worth translating—"Formerly, the products of gardens were most approved, for they are always ready for use, and speedily prepared; they require no fire, and, therefore, fuel is economized. Thence they were called *acetaria*; they are easily served up." Besides, we will now quote an old translator of Pliny—"Besides, light they are of digestion; they breed no heaviness in the head; they offend not the brain, nor any of the senses; and, least of anything, make quarrel to the loaf, and spend little bread."

In those days of simple-mannered Rome, the preparation of the salad was a brief employment—for "the Roman supper, a radish and an egg" was no poetical exaggeration. Luxury, however, soon included even the salad within its intricacies and exaggerations. Columella lived in the days of the Emperors, and then, even the Roman salads became imperial. "Put into a mortar—says this associate of Claudius—savory, mint, rue, coriander, dill, sliced leek, or, in its absence, green onion, the leaves of lettuce, and of rocket, green thyme, green pennyroyal, and salt new cheese. Bruise these together thoroughly, and mix with them a little peppered vinegar. Put the mixture in a deep dish, and pour over it oil. When those green herbs have been well bruised, mix with them the cleansed (skinned) kernels of walnuts, as many as your taste prefers; thoroughly incorporate with the mass a little peppered vinegar, and pour oil over the whole." Nor were they ignorant that a gleam of sweetness and of high savor would improve "the herbaceous treat;" for honey and pickled fish, (*Garum*), the counterpart of our anchovy, are mentioned as desirable additions.

A Dean of St. Paul's has recorded, even in rhyme, that a salad artistically prepared, "Would tempt a dying anchorite to eat;" and another authority has anathematized the blundering monster who neglected to bring the herbs cool and crisp to the very margin of the salad-bowl—"T'were well to mix it standing in an icehouse."

Modern authorities have been strangely neglectful and silent upon these preliminary cares. Not so were those of a previous century; and even Batty Langley, in a quarto dedicated to royalty, gives the following:

*Directions for the gathering, ordering and dressing of a Sallet.*

"In the choice of sallets observe,

"First, that the kinds are young and delicate.

"Secondly, that they are picked very clean from imperfect, slimy, etc., leaves.

"Thirdly, that each kind be washed separately in two clean waters.

"Fourthly, that they be well drained in a cullender, and afterward swing'd dry in a clean napkin.

"Fifthly and lastly, that every sort be proportioned as directed in the preceding sections, and laid singly in the dish, in such a manner as to form a pyramidal or other agreeable figure.

"N. B. That during the months of January, February and March, sallets may be cut at any time of the day; but when the weather increases in heat, the best time to gather or cut a sallet, is about eight or nine o'clock in the morning, to be afterward kept in a cool place till within one hour before it is eaten, at which time it should be washed as before directed, and not immediately before it is eaten, as practised by many.

"And when you are obliged to cut a sallet in very hot weather, put it into spring water for the space of half an hour or more, and then take it out and order it as before directed.

"And having thus gathered and washed your sallet, the next work is the dressing, wherein observe,

"First, that the oil be very clean, smooth, light and perfectly sweet, without any sort of rancid smell.

"Secondly, that the vinegar or other acid, be perfectly clear and fresh.

"Thirdly, that the salt be of the brightest and best refined kind, and moderately dry.

"Fourthly, when sugar is used, that it be the very best refined.

"Fifthly, that the vinegar, salt and sugar be proportioned to the heat or cold of the stomach, as near as can be.

"Sixthly, that the sallet be composed of

such herbs as are agreeable to both weather and constitution.

"N. B. That sallets should be so chosen, as to be agreeable to both weather and constitution, as is said before, viz., those which are hot, for cold weather and cold stomachs; the temperate ones for temperate weather; and the very cool ones for very hot weather, as well as hot stomachs.

"N. B. That sallets may be so mixed, as to be hot and moist, hot and dry, temperate, etc., as, for example, onions and cucumbers being mixed together, viz., double the quantity of cucumbers as of onions, the one being cold and moist in the second degree, and the other hot and dry in the fourth degree.

"This mixture moderates the opposite natures of both, and causes them together to be of a temperate quality, and the like of all others.

"The best dishes to dress sallets in are china dishes, on account that the oil and vinegar are disagreeable to both silver and pewter."

#### "The Oxoleon.

"Take of clear and perfect good oil olive three parts; of sharp vinegar, lemon, or juice of orange, one part; and therein let steep some slices of horse radish, with a little salt, and some in vinegar alone; gently bruise a pod of Guinea-pepper, straining both the vinegars apart, to make use of either, or of both, as they best like. Then add as much good dry mustard grated as will lie upon a half-crown piece, beat and mingle all these very well together; but pour not on the oil and vinegar, till immediately before the sallet is ready to be eaten; and then with the yolk of two new laid eggs boiled, squash and bruise them all into a mash with a spoon; and lastly, pour it all upon the herbs, stirring and mingling them till they are well and thoroughly imbibed, not forgetting the sprinkling of aromatic flowers that are in season, as well as thin slices of red beet, horse radish, berberies, etc."

Such were the preparatives, but modern authorities differ somewhat from this salad-dresser to George II, in their compounding of the *Oxoleon*, or oiled-acid, for the bowl. So accurately should this be prepared, that to please some fastidious palates, we have known one invariable guest that had not an

accomplishment beyond his skill in salad making. In a still earlier day, "when statesmen shrank as Junius plied the lash," the popular salad-dresser received his guinea for one mixing, and rolled to his toils in his chariot just before the appointed hour on which the bowl of acid, oily, green, salt, savory and insipid, was needed for the side-board.

The judgment of the compounder of such contrarieties was not confined merely to the preparation of the *Oxoleon*; a point quite as grave and as difficult, was to apportion and select the herbs. Here, again, all modern authorities are silent; but not so Batty Langley, for he who had a genius sufficient for the apportionment of a palace, found no difficulty in meting out the ingredients of a salad-bowl. He decrees that of *Corn Sallet*: the proportion to be mingled in the bowl "is double the quantity of any other sallet herb eaten in composition;" of *Garden and Water Cresses*, "three times the quantity of any other kind of sallet herb used therein;" of *Fennel*, "in an indifferent sallet, about ten of the young shoots;" of *Lettuce*, if the sallet "be composed of three kinds of herbs, one-third part; if of four kinds, one-fourth, and so on;" of *Rampion*, when a sallet is composed of five, six or more sorts of herbs, and of each a *Pugil*, (that is, as much as is generally taken up with the thumb and two fingers,) to such a sallet we generally add twelve roots, and of the seed leaves, or tender tops, an equal quantity of any other herb, radish excepted;" of *Rocket*, "if the sallet is composed of cooling herbs, there may be one pugil or equal quantity;" of *Cilery* (Sellery of Langley,) "the number of roots eaten in a sallet, is generally about five or six; when of other kinds, there is but a pugil of each;" of *Sorrel*, "the usual quantity is a fourth part, when the sallet is composed of four kinds of herbs, a fifth when of five, and so on;" of *Tarragon*, he observes, that if well mixed in a sallet, it gives an agreeable relish to the compound, "although some can not endure any part of it in a sallet. When a sallet is composed of six or seven sorts of herbs, and of each a pugil, to them may be added about twenty-five large leaves of Tarragon."

Mr. Langley gives similar directions relative to many more "delectable sallet herbs," but with this we must close our list; but,



as we have said, that modern authorities differ as to the desirable proportions of "the Oxoleon," we will conclude with the usual recipe thus given in verse by the Rev. Sidney Smith:

"Two boiled *potatoes*, passed through kitchen sieve,  
Smoothness and softness to the salad give.  
Of mordant *mustard* add a single spoon,  
Distrust the condiment that bites too soon;  
But deem it not, thou man of herbs, a fault  
'To add a double quantity of *salt*.

Four times the spoon with *oil* of Lucca crown,  
And twice with *vinegar* procured from town—  
True flavor needs it, and your poet begs  
The pounded yellow of two well-boiled *eggs*.  
Let *onions*' atoms lurk within the bowl,  
And, scarce suspected, animate the whole.  
And, lastly, in the flavored compound toes  
A magic spoonful of *Anchovy sauce*.  
O! great and glorious!—O! herbaceous treat!  
T'would tempt the dying anchorite to eat;  
Back to the world he'd turn his weary soul,  
And plunge his fingers in the salad bowl!"  
—*Cottage Gardener*.

## Pomology.

### CHERRY FESTIVAL AT CLEVELAND.

THROUGH the politeness of Professor Kirtland and F. R. Elliott, it was the good fortune of some of the pomologists of the country to meet at Cleveland, Ohio, on the 22d of June last, for the purpose of examining the cherry orchards and fruits of those gentlemen.

The occasion was one of great pleasure to all those who were able to participate in the festivities of the meeting. "Cherry ripe," is indeed a most attractive call, and it is a matter of surprise that any who heard the summons failed to obey it, and receive the cordial welcome of the warm-hearted friends who awaited us, and who must have felt some little chagrin, that so many of the pomologists of the eastern states, whose company was especially desired, did not find it convenient to attend this jubilee, when they might have seen the new fruits *in situ*, as the geologists would say. They would thus have been able to test new varieties, that can not be grown and fruited in their own neighborhood for many years.

Fortunately, however, some of the most active and persevering of our own fruit-growers were present, and their observations and records will be added to previous notes, and probably, also, confirmed or cor-

rected by further study next year, so as to enable them to present the new fruits before the next meeting of the National Pomological Society.

Among the visitors, all were pleased to see the "*Old Doctor*," who hails from the eaves of the Prairie Farmer. Dr. J. A. Kennicott is the pillar and promoter of pomological science in the great North-West. His benignant smile, and warm-hearted expressions produce a sunshiny influence wherever they extend. As a grand balance-wheel, or regulator conservative, and a staunch supporter of the auld kirk, the portly form, and grave, yet happy, countenance of the representative from her British Majesty's dominions across the lakes, were no less heartily greeted, as, in their congress of cherry-eaters, no sectional feelings, nor national prejudices were allowed to interfere with the discussion of the luscious coral and jet fruits presented. The delegates from the Queen city, it may be stated, without doing violence to the truth, were a dignified body, and well represented the various interests that are largely concerned in pomology among us.

The meeting, with its attendant festivities, were much enjoyed by all participants, most

of whom were judiciously selected as proficient, or, at least, advanced students of the attractive subject in hand.

The gentlemen from Cincinnati, Messrs. Ernst, Bucanan, Jackson and Warder, at the request of the Horticultural Society, made the following report on the second of July, ult., through their chairman.

#### REPORT.

*Dr. Mosher, President of the Cincinnati Horticultural Society, Sir:*—At the request of yourself, and the members of the society, we proceed to report the transactions of the meeting held by invitation of Dr. Kirtland and F. R. Elliott, Esq., at Cleveland, on the 22d and 23d of June, to examine the new cherries originated by the former gentleman.

After a ramble over the newly improved grounds of Mr. Elliott, viewing his fine collection of specimen trees, quite a number of gentlemen, from various parts of the West, proceeded to the hospitable mansion of Professor Kirtland. Much to the regret of our host and the company, not one of the enlightened pomologists who had been invited from the east was present to participate in the interesting scene and comparison. This is the more to be regretted as such an opportunity to compare the new with many of the best old, or European sorts, side by side, grown in the same soil and climate, under the same treatment, and often in the same tree, may not soon again occur.

The season, as with us, has been warm and dry, which doubtless affected their size and quality unfavorably. Still the sight of the fruit on the trees, and the result of testing their qualities were highly satisfactory.

The process of testing, and obtaining the unbiassed opinion of each gentleman, was most unexceptionable. The fruit had been previously arranged in separate dishes on a table, with numbers, but without names, and each gentleman was provided with paper

and pencil; when each sort was passed around the table, in order, each of the company taking part of the fruit from the dish with its number, and making his own remarks on its merits. These remarks were afterward read in the order taken down, after which was given the name corresponding to the number. This examination embraced many of the Professor's seedlings, as also some of the finer old sorts. A singular coincidence of taste and judgment was developed which almost amounted to a unanimous opinion on the merits of most of the sorts presented for inspection.

After this part of our pleasant duty was performed, the company resorted to the trees, to inspect their general appearance, bearing qualities, hardiness, the tendency of being attacked by insects, &c. Here again the inspection was most satisfactory, and with hardly an exception, showed their great bearing properties, hardiness and freedom from the attacks of insects.

These comparisons were made in connection with such of the old sorts as the Black Tartarian, Elton, Knight's Early Black, Black Eagle, American Heart, Yellow Spanish, American Amber, Black Heart, Napoleon, Bigarreau, Madison Bigarreau, Reine Hortense, Belle d'Choisy, etc. The new cherries on which an expression of opinion was had, were

*Governor Wood*,—Large, superior, and a great bearer.

*Ohio Beauty*,—Very handsome, good, and a great bearer.

*Black Hawk*,—Medium size, dark red, not fully ripe, but indicating a superior fruit, becoming a liver colored black when ripe: excellent for market.

*Delicate*,—Very fine, light red, and a good bearer.

*Mammoth*,—Large, light red, tender, very fine, one of the best, but not so good a bearer.

*Cleveland Bigarreau*.—Large, light yellow, red cheek, fine flavor, and a great bearer.

*Kirtland's Mary*.—Large, light red, not fully ripe, but a superior fruit, and is a great bearer.

*Osceola*.—Good size, black, very pleasant, handsome on the tree, and a good bearer.

*Red Jacket*.—Medium size, light red, good, and a great bearer.

*Doctor*.—Pleasant and fine, though may not prove so desirable as some of the other sorts.

*Elliott's Favorite*.—Very handsome on the tree, a great bearer, and very hardy.

*Jocktos*.—Large, black, tender, pleasant, and a great bearer.

*Rockport Bigarreau*.—Large, very fine, and a great bearer.

Many other seedlings, not yet named, were examined, some of which will undoubtedly prove first rate, and assume a position among the finest of this delicious fruit, though it was preferred to let them remain on trial a few years longer ere bringing them to public notice.

The opinion, after full examination, was freely expressed, that in making a selection of five or ten sorts, if the selection must be confined to the old, or new varieties, the latter would be chosen without hesitation.

The origin of these new cherries is not an impulse of a few years, but the work and thought of the greater part of the Doctor's active life, his attention having been drawn to it at an early period, under peculiar circumstance; he has persevered without faltering, until the result of his unremitting labor justly places him along side of such men as Van Mons, in the department of originating fine fruits.

In conclusion; we may be permitted, without laying ourselves open to the charge of egotism, to congratulate the public that they are no longer obliged to go beyond the

boundaries of our own beautiful Ohio, for superior varieties of this fine fruit.

Respectfully submitted,

A. H. EMMET, *Chairman*.

#### Ad Interim Report.

To the Pennsylvania Horticultural Society:

The Fruit Committee, in presenting their usual monthly ad interim Report, would remind the Society that, at the stated meeting of last month, specimens of two new Grapes (one a seedling of the *Black Hamburgh*, the other the *Musqué Verdel*), were exhibited by the originator, Mr. J. Fisk Allen, of Salem, Massachusetts. Wishing to have an opportunity of carefully examining these two varieties, the Committee only noticed them cursorily in their regular Report for that evening, with a promise of submitting a more detailed pomological description of them in their June ad interim Report. The specimens having been winter forced, and being ripe in March, were kept too long after their maturity to be in their greatest perfection.

*Allen's Seedling Black Hamburgh*.—The bunch exhibited was not very large, though it is probable there will be an improvement in this respect. *Berry* large, black, oval; seed grey; flesh solid, and possessing much of the character of the *Black Hamburgh*; quality "very good."

*Musqué Verdel*.—This is a natural cross between the Grizzly Frontignan and the Verdelho, the Wine Grape of Maderia. *Bunch* large, shouldered, loose; *berry* rather small, about half an inch in diameter, round, pale red; seed light cinnamon color; flavor rich, saccharine, highly perfumed; quality "best;" said to be as early as the *Black July*, and the *Pitmaston*.

From Mr. Gerhard Schmitz, of Philadelphia:—Fine specimens of two of his *Seedling Strawberries*:

1. *The Pennsylvania*.—This variety is a seedling of the Moyamensing, and was exhibited by Mr. Schmitz last season, for the first time. Fruit large; broadly conical; dark crimson; seed crimson, and when shaded, yellow, set in depressions not very deep, with roundish intervals; flesh red; flavor fine; quality "best;" sexual character *pistillate*; leaf large, deep green, serrate.

tures crenate. The Committee award a premium of five dollars to this variety, as the best new American Seedling Strawberry of superior quality, after two years' trial.

2. *Schmitz's No. 3*.—A Seedling of the Washington, examined now for the first time. Fruit large; roundish ovate, sometimes inclining to conical; light crimson; seed crimson, often yellow, set in rather deep indentations, with intervals somewhat ridged; flesh pale red; flavor pleasant; quality "very good;" sexual character pistillate. Leaf large, light green.

From Caleb Cope, Esq.:—Specimens of four varieties of Strawberries:

1. *McAvoy's Superior*.—This variety originated with D. McAvoy, of Cincinnati, and was formerly known as his No. 12. In May, 1852, it received a premium of one hundred dollars from the Cincinnati Horticultural Society. Mr Cope's specimens were of great size and beauty, some of them measuring five and a half inches in circumference. [Hovey's, shown at the same time, measured "nearly four inches."] Fruit very large; roundish ovate, occasionally slightly necked; deep brilliant crimson; seed crimson, sometimes yellow, set in indentations not deep, except in the largest specimens, when the intervals are also somewhat ridged; flesh red; flavor exquisitely fine; quality "best," sexual character pistillate.

2. *McAvoy's No. 1*.—Large; roundish; deep scarlet; light crimson seed; indentations rather deep, intervals not ridged; flesh whitish, partly stained with red; flavor agreeable; quality "good," perhaps "very good;" sexual character pistillate. An abundant bearer.

3. *McAvoy's Extra Red*.—Large; roundish; scarlet; seed red, sometimes yellowish; indentations tolerably deep, intervals somewhat rounded; flesh yellowish, slightly stained; sub-acid flavor; quality only "good;" pistillate; extraordinarily productive.

4. *Longworth's Prolific*.—This fine variety originated with C. F. Schneicke, of Cincinnati; and was formerly known as Schneicke's Hermaphrodite. Very large; roundish ovate; brilliant crimson; seed of the same color, sometimes yellowish, set in rather deep indentations with rounded intervals; flesh red; flavor fine; quality "very good." A variety of great excellence [and beauty];

perfect in its sexual organization, and remarkably productive, a rare circumstance with staminate varieties of large size.

From Mr. Robert Buist:—Fine specimens of two varieties of Strawberries, *McAvoy's Superior* and *McAvoy's No. 1*.

From Mr. Henry A. Dreer:—*Moyamensing Strawberry*. This fine variety originated with Mr. Gerhard Schmitz, of this city, and took the premium offered by the Pennsylvania Horticultural Society for the best seedling strawberry exhibited in 1848. Fruit rather large; roundish conical; deep crimson; seed crimson, set in rather deep depressions, with rounded intervals; flesh red; flavor very fine; quality "best;" sexual character, pistillate; leaf large, with crenate serratures.

From Dr. E. W. Carpenter, Lancaster:—*The Triumph of Cumberland cherry*, a native of Cumberland County, Pennsylvania. Specimens fine. Large; obtuse heart-shaped, sometimes roundish, compressed at the sides; deep crimson, almost purple when fully ripe; suture indistinct; stem rather long, slender, inserted in a broad, open cavity; apex slightly depressed; stone roundish oval, compressed; flesh rather solid, red, slightly adherent to the stone; flavor fine; quality "best;" period of maturity about the middle of June. [This variety has not been known in Ohio—The Black Elkhorn having been received for it at Cleveland.]

#### Ficus Carica, or Fig Tree.

THE gigantic efforts now making by the various pomological and horticultural societies, to raise and acclimatize new seedling varieties of home and tropical fruits, trees, plants, etc., adapted to the various sections of the United States, induce me to trouble you with this communication, and, at the same time, to urge upon the attention of our southern planters and horticultural friends, the peculiar fitness and adaptability of the climate and soil of the southern states, to the growth and perfection of the *figus carica*, or common fig tree. Probably no fruit in existence is better calculated to promote health, so easily grown, and so little liable to be effected by blight, insects, etc. This fact has been illustrated to the satisfaction of that "old inhabitant," by

those who have raised magnificent fig trees in our city and its vicinity, ranging from eight to fifteen inches in diameter, and from twenty-five to thirty feet in height, and which have withstood the vicissitudes of our climate during the last half century. The many varieties of this peerless and magnificent fruit, which have been successfully grown and fruited, in this city and its suburbs, have satisfied those of my friends who were born and raised in France, Italy, and on the shores of the Mediterranean sea, (the home of the fig,) that the fruit grown and matured in the vicinity of Mobile is as fine and luscious as in its native clime. Who, then, let me ask, is unable to plant and cultivate a few varieties of this admirable fruit, so healthy and peculiarly adapted as a "southern home" desert and table fruit? Talk of "Hovey and Peabody's" fine strawberries. Who would give in exchange a splendid dish of green Ischia Figs, with their drop of honey at the crown, their delicate green flesh, rich, sweet, and delicious, for breakfast, etc.?

The intrinsic value of this fig, as a desert fruit for the table, and preserving, (and nothing can equal it for that purpose,) is the *ipse dixit* of my friends, from various specimens tasted at my table, and which were manufactured by Mrs. H., as, also, its great value for poultry, etc., is only to be estimated by those who have grown the fruit to perfection, and experimented with it for culinary purposes, etc. During the last month I have planted, at "Belle Rose Cottage," some five hundred cuttings and rooted plants of the creole varieties, obtained during a series of years from various sources, and from approved and well-known varieties. I therefore flatter myself, (Providence permitting,) to be enabled to show you, within a few years, the fig orchard of the south, and one that embraces all the choice varieties to be had, at home and abroad, with now and then an approved seedling.

To those of your readers unacquainted with the history, origin, and varieties of the family ficus, I respectfully append the following historical and statistical information. There are forty-six species, forty-five of which are principally ornamental evergreens, viz: the Bengal, Superstitious, Religiosa, Otaheite, Elastic Gum, the Australis, and the Bengalensis, or Banyan tree of India, etc.

The Ficus Carica, or common fig, is a native of Caria, in Asia, and naturalized in the Levant, south of Europe, and America, where it forms large trees, as in the vicinity of Mobile. It is with us, as is the case in every part of Europe, a deciduous tree; while in tropical countries it is evergreen. "The fig was introduced into England by Cardinal Pole, in 1525, and still exists in the garden of the Archbishop, in Lambeth. Some of these trees cover a space of fifty feet in length, by forty in breadth. They are of the white Marseilles sort, and bear delicious fruit." In England, (the climate being humid,) it is cultivated merely for the desert. In fig countries, its cultivation becomes a matter of great importance as an article of exportation, and as an article of food, which they prepare in a variety of ways, both in a ripe and unripe state. There are few tables in France and Italy, which do not use this fruit in some shape or other, either fried or stewed, or as an addition to their desert. We are supplied chiefly with our preserved figs from Spain, the south of France, Italy, and the isles and shore of the Mediterranean sea. It is a singular fact, that fig trees should not be planted near meat safes, or larders, as they have the singular property to intenerate the contents sooner than may be desirable. Phillips, (in Pom., Brit.,) relates an experiment made upon a haunch of venison, which had lately been killed, being hung up in a fig tree, when the leaves were on, about 10 o'clock in the evening, and was removed before sunrise in the morning, when it was found, '*à la Française*,' in a perfect state for cooking."

The number of varieties of this fruit are supposed to be great. In fig countries, they are produced from seeds so readily, that many varieties are yearly springing up. It is supposed that there may be about twenty-five distinct varieties worth cultivating. Among which, are the Brown, Black, Green, and Yellow Ischia, the large White Genoa, Early White, Black Genoa, Blue or Purple, large Black Naples, Italian or Brown Naples, Brown Turkey, Brunswick, Hanover or Madonna, Lee's Perpetual, White Marseilles, Nerei Pregustata, and Fig Celeste.

Respectfully, your obedient servant,  
WM. DE FOREST HOLLY.

—Alabama Planter.

### Cocoa Nut Tree.

In 1813, it was estimated that, on the southwest coast of India, ten millions of cocoa-nut trees at least were growing. The tree begins to bear when about eight years of age. The nuts that are intended for planting are allowed to remain on the tree longer than others. They are taken off when thoroughly ripe, after having been put in a shed or outhouse, till all the moisture of the thick outside husk or bark is dried up, they are hung in pairs over the branches of some trees near the house, where they remain till the young plants shoot up with a firm leaf through the eyes of the nut. Instead of hanging them up in trees, some persons put them in their gardens three or four hundred together, and half cover them with earth. In this way the young plants soon make their appearance. When the leaf is about three feet high—at which time also there are long struggling roots hanging to them—holes are dug in the ground, about two feet deep and one and a half in diameter, into which the plants are put, about two yards apart from each other; a little earth is thrown in upon them, but not so as to cover the nut. For several years they appear to advance but little in height. During this time, however, their trunk is increasing in bulk: and from the fifth to the seventh year, or thereabouts, they grow to a considerable height. Soon after, a sheath containing the blossom appears, shooting out from the thick butt-end of the leaf; and when about a foot high and two inches in diameter the sheath bursts; and in a few days the different portions of the flower, consisting of innumerable seeds, attached to a long stake, bend down gracefully on all sides. After awhile, a great number of these seeds fall off, and small nuts, to the number of twenty to fifty, on an average, remain on one stalk. From the time that the flower bursts, to the time that the nuts are ready to be gathered, six months elapse.

The leaves of some trees are twenty-five feet long, and the small leaflets that hang down from each side of the thick middle fibre four feet long. As the leaves are of this length, and very heavy, it is necessary that some provision should be made for attaching them firmly to the trunk. This provision is made, and consists of a very strong net-like substance, extending about a

foot along the base of the leaf; and as the inner part of the butt of the leaf is *scooped out* in order to grasp and enclose the trunk more firmly, this netting holds it tight round the tree, and binds it fast till it has performed its office of acting as a support to the cluster of nuts that rest upon it. This network is called "matulla," and is one of the most curious productions of nature. The threads or fibres are so regularly crossed and interwoven, that to one unacquainted with the article it would appear to be a species of coarse cloth manufactured in the loom. Without preparation, this material is well adapted for sieves and filters; and its natural texture renders it in the hands of the ingenious, an admirable substance for the formation of clothes.—*Annals of Science.*

### The Normandy Genet.

I will give you the history of what I presume you call the Rawle Genet, as related to me by Mr. John Brown, one of the present U. S. Senators from the State of Kentucky.

His statement was this,—that it was introduced into this country from Normandy in France, by Mr. Genet, the French Minister, about sixty years ago, during the administration of Gen. Washington. He married a daughter of Gov. Clinton, and settled on a farm near Albany. He noticed that the Apple was very often killed by spring frosts in the United States; and as this apple tree puts forth its blossoms about two weeks later than other kinds, he concluded that it could be advantageously introduced into our orchards. Senators Brown and Breckenridge introduced it into Kentucky, and it soon became so popular as to constitute the greater portion of the orchards in that State. This tree has other qualities which give it preference besides its late bloom. It is a sure bearer—puts out lateral branches—never grows in the shape of a Pear Tree. Its wood and bark when cut have a solid and healthy appearance. The fruit on a young and old tree is so different that they would hardly be taken by one unacquainted with the fruit to be the same. The young trees bear larger fruit, and it is more acid and larger than the old trees. The fruit of the old trees is very red and sweet. They are good for cider and cook-

ing, and juicy — high flavor, and keep through the winter better than most apples. My friend, Mr. Robert Conover, of Clary's Grove, presented me with a few of these apples, about the middle of April, as sound and well flavored as when put up in the fall.

If the history which I send is correct, (of which there is not a doubt,) the tree should be called the *Normandy Geneting*. J. S.

The above is from the Daily Journal, Springfield, Ill. If the account be correct, it will tend to overthrow our present orthography and nomenclature of this delicious and excellent apple. It seems hardly credible, however, that so good a fruit should have been lost sight of in Europe. Fine specimens were presented at the Cincinnati Horticultural Society, on the 2d of July, perfectly preserved, by Jno. A. Mottier, who also exhibited the Putnam Russet and Newtown Pippin, equally sound, but of inferior flavor.

#### Potting Strawberries.

MR. RIVERS, in London, raises straw-

berries in pots, by a peculiar process, thus described :

About the second week in July, he says, he filled a number of six-inch pots with a compost of two-thirds loam, and one-third rotten dung, as follows : three stout pieces of broken pots were placed in the bottom, and a handful of the compost put in ; a stout wooden pestle was then used with all the force of a man's arm to pound it, and then another handful, and a pounding, and another, t'll the pot was brimfull, and the compressed mould as hard as a barn floor. The pots were then taken to the strawberry-bed, and a runner placed in the center of each, with a small stone to keep it steady. They were watered in dry weather and have had no other care or culture. For two or three years I have had the very finest crops, from plants after this method, and those under notice promise well. If the pots are lifted, it will be apparent that a large quantity of food is in a small space. I may add, that from some recent experiments with compressed earth to potted fruit trees I have a high opinion of its effects, and I fully believe that we have yet much to learn on the subject.—*Rural*.



## The Vineyard.

### VINEYARD CALENDAR FOR AUGUST.

THE past month is one of the most trying to the patience of the vine-dresser ; having opened, as in the present season, with a rich promise of a profuse harvest of the luscious bunches, which were favored by preceding drought, the vigneron has high hopes of an abundant return, which, alas ! are too often destroyed by the accession of hot and

showery weather, which condition of the atmosphere is the supposed cause or concomitant of the malady called the rot. In the present state of our knowledge, however, we must submit to the evil, being ignorant of its preventive.

*Cultivation.*—The general impression among the best vignerons is adverse to deep tillage, and that culture should rather consist in subduing the weeds and grass, by means of a sharp hoe, than in any attempts to stimulate the growth of the vine; all summer tillage should be shallow, whether performed by the hand, or cultivator. Those who advocate the sowing of turnips among the vines will embrace the opportunity offered by the last dressing, and thus secure a partial crop, which grows while the vine is dormant, and provide a winter covering for the soil, and a green manure to be dug in next spring.

*Trimming and tying.*—The old plan of severe summer pruning is much modified by those who closely observe the vine, and witness the injuries by hail and insects to which the leaves are subject. In previous months the bearing branches were shortened, and the laterals on the canes were pinched in, while they were at the same time secured to the stake, and arched over to the next as they advanced in growth, now all laterals toward the end of the canes are allowed to grow as they aid in perfecting the wood, and furnish the desired shade to the fruit beneath. The bearing branches should also be carefully tied up when the increasing weight of the fruit threatens injury.

#### American Grape Vines.

I NOTICE that your correspondent, "P.," on the subject of native vines, suggests, "that they may prove more productive if allowed to ramble." And the reading of his article induces me to give you my experience corroborative of the above.

Some years since I purchased of Mr. Pond, Cambridgeport, Massachusetts, a couple of "Pond's seedlings," which I planted out, giving a trellis in front of a light board fence, eight feet in high, with a south-east aspect. Adjoining, and on the same trellis, are Catawba and Isabella, the latter of which did not fail to give well ripened fruit, while the Catawba promised well, but the fruit failed to ripen, and being overtaken by the autumn frosts was all destroyed. Year after year I waited to see even the appearance of fruit on the Pond's seedling, till out of patience it was abandoned to its own course. Immediately in the rear of the fence is a row of good sized cherry trees, so closely planted that the limbs interlock, and into those trees the Pond's seedling "run riot," and, as a consequence, they have not failed to give well-ripened fruit, notwithstanding they were shaded by the leaves of the trees.

Profiting by this hint, I allowed the Catawba vine a like range, and while the berries failed to ripen on the portion which was on the trellis, those in the trees have always been fully matured. W.

#### Letter from Illinois—Grape Prospect.

DEAR SIR: Inclosed you will find a three dollar note, as I wish to subscribe for your Western Horticultural Review.

I cultivate six acres of vineyard. My grapes, most all Catawba, look very promising now, but July has just commenced, and probably the rot may soon set in. Up to this day I have not seen any signs of it. The two last seasons I had a very poor crop from them; in 1850 my grapes looked very well. My vineyard is situated on the south side of a hill, in the Looking-Glass Prairie, about thirty miles east of St. Louis. All the trouble we have here with the grape, is the rot, which commonly sets in with the



beginning of July. I wish very much to learn how the grapes are at present at Cincinnati, and if you have any means to prevent this disease, or cause it to be less destructive. Yours, very respectfully,

SOLOMON KOEPLI.

Highland, Illinois, July 1, 1853.

REMARKS.—The prospect of the crop here is the most favorable we have ever witnessed. At this time we have no symptom of the rot, nor have we experienced any mildew, which is generally believed to be its

precursor. We suppose that this immunity is owing to the dry season we have passed through. But, alas! we know not the cause of either malady, and, therefore, are apprehensive of their approach, until their season be passed.

An experienced estimator of the crop, who has been employed for years by one of our wine purchasers to reckon the crop, has assured me that if the season continued favorable, we should have 700,000 gallons this season, which I very much doubt.

## Transactions.

### The Cincinnati Horticultural Society

Has held some interesting meetings during the last month; the tables have been well furnished from week to week with summer fruits of different kinds. Among the apples, those brought by M. McWilliams, as the Early Yellow June, were deservedly much admired, and are highly recommended. This fruit is a waxy, or creamy, white, and, in many respects, resembles the Prince's Early Harvest, but it has a milder acid, and is more palatable. Fine specimens of Rawle's Janet, Newtown Pippin, and Putnam Russet, in a perfect state of preservation, were shown, by John E. Mottier, on the 2d of July. Amire Joannet pears appeared in June, and were thought to bear a good flavor. Other summer varieties followed in order. Very handsome display of pink-, picotees and other flowers appeared from time to time. The premiums for the former were awarded to William Heaver. That for Hollyhocks was given to Miss Jones, but those grown by William Heaver were of better character and habit, and were ruled out simply on account of date.

### Kentucky Horticultural Society.

This praiseworthy enterprise continues its interesting weekly exhibitions. The display of fruits on Saturday last was as good as could be produced at that period of the season, but to-morrow a better collection will doubtless be brought forward by members and cultivators, and after the middle of July, the weekly display of peaches, pears, apples and other fruits will be both instructive and interesting.

The show of flowers on Saturday, surpassed in variety, in beauty and in effect, any of the previous exhibitions, and it was truly gratifying to observe the increasing interest that the ladies have manifested in the flower department, both as contributors to the exhibition, and as visitors to the rooms. So long as the ladies continue to take an active and lively interest in the Society, it is certain to be attractive and successful. This we know they will do, and we know, too, the Society must and will succeed, for this community

has far too much refined taste to allow such an effort to fail.

It has been stated that our commercial florists and gardeners will not generally contribute fruits and flowers, because the prices obtained for them at the exhibition rooms are lower than the same specimens would bring in the market house, or at the conservatory. If any of them are influenced by such a narrow-minded feeling, they stand greatly in the light of their own interests, for of all others, those very men are the ones the most benefited in a pecuniary point of view, by the encouragement of a general taste in the community for the pursuits of horticulture and of a fondness for flowers, which these exhibitions are certain to promote. And, besides, even if they gave their contributions to the Society for nothing, they would be repaid tenfold, aye, an hundred fold, in the course of time, inasmuch as their contributions serve as advertisements for them, that meet the eye of not only hundreds of visitors to the show, many of whom are amateur cultivators and purchasers of fruits and flowers, but the advertisement also is read by the thousands of readers of those newspapers, that liberally and generously publish the lists of contributions at each weekly show.

Much credit is due to the executive committee of the Society, Messrs. Ormsby Hite, Thomas S. Kennedy and A. G. Munn, for their exertions to give interest, tone and character to these exhibitions; and if their efforts continue to be aided as they have been by those ladies of cultivated taste and refinement, who duly appreciate the most lovely and beautiful of nature's creatures—themselves only excepted—the Society will be enabled to boast of a series of exhibitions surpassing in attractiveness any ever held before in this city.

We noticed in fruits, Apricots from L. Young, Esq.; Chickasaw Plums from Dr. John T. Miller and O. Hite; Crescent Seedling Strawberries from the latter gentleman. This variety is a seedling from New Orleans, and fruited for the first time, we believe, in our vicinity.—*Louisville papers.*

### Cayuga County Horticultural Society.

W. Auburn, Aurora and Owasco unite in one floral exhibition, we may justly expect something very recherche; such, indeed, was the first exhibition of this society, in the village of Auburn, on the 17th ult. In the first place, Stanford Hall is one of the finest in the country for such an exhibition, and the committee completed their arrangement with a perfection I have never seen excelled.

The show of summer fruits, particularly strawberries, was very fine. Messrs Thorp, Smith, Hanchett & Co., of Syracuse, had a fine display of roses, greenhouse plants, etc. In the evening the premium bouquets, flowers and fruits were sold to citizens at the most liberal prices. If the same spirit continues to prevail, this society will soon become one of the most interesting and important in our country.

Towards evening of that day I looked through the fine garden of Messrs. H. E. Smith and Mr. Sidney Warner, of Waterloo, where I noticed a great variety of beautiful roses, mammoth delicious strawberries, and all the other et ceteras with which our best horticulturists are now filling up their private gardens. Mr. Smith's garden, I wish to name particularly as a model. It is the most thoroughly cultivated, and most completely well filled of any small spot of ground I have ever seen.—*Rural.* R. G. P.

### Geneva Horticultural Society.

On the 23d, a similar horticultural exhibition of the Seneca Agricultural and Horticultural Society was held at Geneva, and although it was only a town society, yet it almost rivaled the fine one in Cayuga county. I never knew ladies of wealth, taste and high standing so lavish of their personal efforts, their greenhouse and garden stores, as were the ladies of Geneva, and as a consequence, a very rich treat was afforded to the public. Very large collections of roses and other flowers, with the same immense number of bouquets graced the exhibition, as did that at Auburn. The best hand bouquet at Geneva sold at auction in the evening for \$5.75. More than one hundred dishes, comprising more than fifty varieties of large and luscious strawberries were also on the tables.

Messrs. Thorp, Smith, Hanchett & Co., of Syracuse, and also Dell Collins, Waterloo, made a most creditable exhibition of choice fruits and flowers, which added very much to the interest of the exhibition and the reputation of their respective establishments.—*B.*

### Albany and Rensselaer Horticultural Society.

THE first exhibition of the society for the season, was held at the State Geological Rooms, Wednesday, June 22d. The show of fruit was not so large as on some previous occasions, as strawberries were past their prime, but that of greenhouse and hot-house plants, and cut flowers was very superior.

#### FRUITS.

**Strawberries.**—JOEL RATHBONE, of Kenwood, exhibited specimens of Hovey's Seedling, Boston Pine, Iowa, Crimson Cone, Black Hawthorn, Burr's New Pine, and Ross Phoenix; C. P. WILLIAMS exhibited Hovey's Seedling, Virginia Scarlet, and Burr's Pine; JAMES WILSON exhibited a new seedling strawberry; E. BUTTERCASE Hovey's Seedling; Mrs. J. T. VAN NAMEE, Iowa; E. CORNING, Jr., Crimson Cone.

**Cherries.**—There were shown by JOEL RATHBONE, Black Tartarian, White Heart, White Bigarreau, Black Heart, Early Duke, Griotte, and White Tar-

tarian; by JAMES WILSON, Werner's Early Black, Knight's Early Black, Elton, and May Duke.

**Grapes.**—E. CORNING, Jr., exhibited two bunches Red Chasselas, very fine, and specimens of Zinfandel, Golden Chasselas, and Chasselas de Bar Sur Aube, in pots.

**Gooseberries.**—Large specimens were shown by JAS. WILSON.

#### PREMIUMS.

**Strawberries.**—For the best and most extensive collection, to Col. Rathbone, of Kenwood, 8 varieties.

For 2d best, and most extensive collection, to Col. Rathbone, 3 varieties.

For best and finest flavored variety, to C. P. Williams, for Burr's New Pine.

For 2d best and finest flavored variety, to C. P. Williams, for Hovey's Seedling.

Mr. Wilson exhibited a staminate seedling variety, of large size, very prolific habit, hardy, and finely formed—of dark crimson color, and of very good flavor.

The grapes exhibited by Mr. Corning deserve special commendation, as the clusters were large, and the berries finely colored. The committee award for them a diploma.

The cherries exhibited were very fine, but as premiums were not offered for them at the exhibition, none could be awarded.

HERMAN WENDELL,  
B. B. KIRTLAND,  
E. DORR,  
*Committee.*

#### PLANTS IN POTS, AND CUT FLOWERS.

The display of these, and especially Pelargoniums, was very fine. The competitors for the prizes offered were Morris Walsh, gardener to E. Corning, Jr.; Wm. Gray, gardener to Joel Rathbone; L. Menand; Mark Taylor, gardener to V. P. Douw; and E. Buttercase.

Among the stove and greenhouse plants in Morris Walsh's collection we noticed good examples of Euphorbia splendens, Stephanotis floribunda, on a globe trellis; Adonia varicolor, a plant deserving of more extensive cultivation; a nice dwarf plant of Justicia carnea, with its flesh-colored flowers, in five spikes; Pavetta cafrina, a good specimen of a rare plant; Clerodendron falax, Erica Boweiana, and Gloxineas candida speciosa, maxima alba, and coccinea, very fine. A fine large plant of Crinum amabile, and Opuntia Braziliensis, was shown from the same place. In William Grey's plants was a fine specimen of Gardenia florida, which scented the room with its delightful fragrance; Vinca alba, Kalosanthus varicolor, Hoya carnosa, a plant in good condition; a good Erica Boweiana, and several fine Gloxineas. From the same place, also, came some well-grown Pelargoniums, particularly Life Guardsman, Heroe, Aspasia and Elegans, the flowers of which were very true to their character. Some fine scarlet varieties, also, came from the same grower. In L. Menand's plants were Nerium album, I'racana variegata, a very fine, variegated stove plant; Vinca alba, and a beautiful little orange bush with seventeen perfect fruit on. Mark Taylor's Pelargoniums were good grown plants, and with proper care, in another season, will make fine plants. Scarlet varieties were also fine and well-flowered; a fine plant of Veronica Andersonii was also shown from the same place.

The cut flowers formed a very conspicuous feature; the quantities from J. Wilson, and Wm. Newcomb were very showy. In the former were some charming roses, larkspurs, (a plant Mr. Wilson is especially noted for,) and a general collection of bedding and herbaceous plants. The same may be said of Mr. Newcomb's cut flowers, among which were many fine, hardy herbaceous plants. Mrs. J. T. Van Namee ex-

hibited thirty-four sorts of native plants, in flower, which were very interesting. The same lady exhibited a hand bouquet of the same, tastefully arranged.

## PREMIUMS.

Best ten plants in pots—for *Cissampelos amabilis*, *Erica* *Boweiana*, *Frysianthus albus*, *Erythrina cristagalli*, *Pavetta coccinea*, *Medinella erythrophylla*, *Stephanotis floribunda*, *Euphorbia splendens*, to E. Corning, Jr., (Morris Walsh, gardener.)

Best six plants in pots—for *Erica* *Boweiana*, *Hoya carnosa*, *Ruellia juncea*, *Vinca alba*, *Kalmia latifolia*, *Gardenia florida*, to Joel Rathbone, (Wm. Gray gardener.)

Best three plants in pots—for *Erica cinerea*, *Hoya bella*, *Erica* *Boweiana*, to L. Menand.

*Pelargoniums*—best six varieties—for Life Guardsman, Clouded Perfection, *Aspasia*, *Rolla*, Clifton Scarlet and Hebe, to J. Rathbone.

*Pelargoniums*—best three varieties—for Hebe, Princess Alice and Elegans, to L. Menand.

WM. NEWCOMB.

WM. JAMES,

W. A. WHARTON,

Committee.

*Premiums on Cut Flowers*.—For the best and most extensive exhibition of hardy roses, to Mr. James Wilson.

For the best and most extensive exhibition of *Herbaceous Peonies*, to James Wilson.

For the best and most extensive display of Annual and Perennial Flowers, to Mr. Newcomb.

For the best collection of native plants, to Mrs. Van Namee, 34 varieties.

For the best twelve and six varieties of roses, none were presented.

LUTHER TUCKER,

JAMES HOGG,

B. B. KIRTLAND,

Committee.

## BOUQUETS, FLORAL DESIGNS.

The following premiums were awarded:

Best large round bouquet, for center table vase, James Wilson.

Best large flat bouquet, for mantle vase, James Wilson.

Best basket bouquet with handle, Mrs. J. T. Van Namee.

Best flat hand bouquet, James Wilson.

Best round hand bouquet, James Wilson.

Mrs. W. A. WHARTON,

J. M. LOVETT,

Mrs. JAS. WILSON,

W. A. WHARTON,

Miss REYNOLDS,

JOSEPH WARREN,

Miss PICKRON,

JNO. J. WENDELL,

Ladies' Committee.

Committee.

## ORNAMENTAL WORK.

There were exhibited by Miss N. McHARG, Instructor, Albany, one Bouquet Paper Flowers; Miss MERRIS, Albany, one Bouquet Paper Flowers; Mrs. G. W. EATON, Hamilton, N. Y., one Fruit Vase of Leather Work; Mrs. Wm. H. WILLIAMS, one Circular Stand, ornamented with leather work.

*Discretionary Premiums*.—The committee on Discretionary Premiums awarded a prize to Miss McHarg, and commended the bouquet offered by Miss Megie, but as the lady is not a member of the society, were not allowed to award any premiums.

## VEGETABLES.

The general display was not as extensive as on some former occasions, but the specimens were unusually fine. Wm. NEWCOMB, of Pittstown, exhibited Grand Admirable lettuce, onions, strawberry peas,

potatoes, sage, new variety, very fine, Double parsley; V. P. DOW, Walcheren cauliflower, Early Ox-Heart cabbage, Early Turnip beet, French Rose radish, Symonds' Gigantic cucumber, Bush beans, Goldfinch potatoes, lettuce; E. CORNING, Jr., Early York Cabbage, White Silesia lettuce, Long cucumbers; JOHN W. HUTTON, White onions, Turnip radishes, Giant lettuce, Giant rhubarb, all superior; L. MENAND, four heads cabbage, very fine.

## PREMIUMS.

To V. P. Dow, (Mark Taylor, gardener,) for best cauliflower; best early turnip beet, best cucumbers To E. Corning, Jr., (James Sloan, gardener,) for best lettuce.

To J. B. Hutton, for best rhubarb.

To L. Menand, for best cabbage.

E. E. PLATT, for Com.

HERMAN WENDELL, M. D., President.

JOSEPH WARREN, Secretary.

Country Gentleman.

## Genesee Valley Horticultural Society.

This exhibition, as usual, contained many objects of interest, although much injury to plants had resulted from severe drouth. The great attention which has been given to the strawberry by cultivators in this region, rendered this part of the show particularly interesting. Fine specimens of McAvoy's Superior were presented by R. G. PARKER and others, which sustains its high character at Cincinnati. In flavor it is decidedly fine, although hardly equal to the best; in productiveness it stands in the front rank; and for size it is fully equal to, or rather exceeds, Hovey's Seedling. Walker's Seedling is found to be a good-sized, fine flavored, productive, valuable, and substantial sort Ohio Mammoth is very large, but with a flavor of very moderate pretensions. Moyamensing, large and showy, and tolerably good. An excellent, dark-colored, dark-fleshed, new seedling, of large size, productive, and as early as the Early Scarlet, was presented by BIZZELL & HOOKER. ELLWANGER & BARRY's new seedlings, the Monroe Scarlet and Genesee Seedling, made a very favorable impression for their value. They also presented beautiful and good specimens of Biston Pine. Large Early Scarlet, and Bishop's Orange, old sorts, still remain unsurpassed for their rich flavor, and none of the new sorts are found fully to equal Barr's New Pine, for all its excellent qualities.

Among the Cherries, none came quite up to Early Purple Guigne for high flavor; and for its mild and agreeably quality and beautiful appearance. Belle d'Orleans was unsurpassed. It is found to be about as early as the Early Guigne and May Bigarreau. Coe's Transparent, about as early as the Doctor, possesses a high flavor, and beautiful appearance. These were the best among the earliest, the season being late, none of medium period of ripening were exhibited.

The large recent introduction of new roses, was well shown by the number of very large collections which occupied the tables, from W. KING, A. FROST & Co., J. A. EASTMAN, J. J. THOMAS, ELLWANGER & BARRY, S. MOULSON, and others, some of them containing several hundred sorts. A beautiful and rich pyramid of roses, dahlias, and some rare flowers of greenhouse plants, was presented from the garden of JOHN GAZIO, Canadaigua. Among the greenhouse plants, we were particularly pleased with those exhibited by J. SALTAR, gardener to J. W. BIZZELL, on account of the excellent training they had received, bringing them into compact, round-headed, densely-flowered specimens, instead of the tall, long-legged

plants so generally seen; two scarlet geraniums, in rustic vases, and some of the verbenas, were especially commendable in this particular.

One of the most interesting portions of the exhibition was the collection of native plants from P. PARKS, of Victor. Among them we observed those beautiful wild-wood flowers, the Bartsia, the single-leaved Pogonia, and the Calopogon; also a fine specimen of Sarcocolla, filling a vessel about two feet in diameter, in full flower, and numerously furnished with its curious pitcher-formed leaves. A single plant of this sort, fresh from its native wilds, possessed in reality a hundred times the interest of all the artificial erections, such as temples, alcoves, etc., but it like a cobblestone house, of successive tiers, of flowers, a sort of material which can never seem appropriate to true taste for composing massive structures. Flowers are, from their very nature, light and decorative, and hence may be most appropriately used for wreathing and ornamenting columns, massive structures, or baskets; but when they are used to constitute the very material of such structures, the incongruity and discordance are at once apparent.—*Country Gentlemen*.

#### Indiana State Board of Agriculture.

NOTICE is given, that the State Board of Agriculture will meet in the Hall of the House of Representatives, at Indianapolis, on Thursday, the 4th of January, 1854, at one o'clock, P. M., and, among other things, will then determine the time and place of holding the next annual fair, and arrange the schedule of premiums, etc.

The members of the board are anticipating a large and enthusiastic meeting of the friends of agricultural and mechanical labor, at the capital, at this meeting. And to aid the cause, it is respectfully requested of all who attend, that they bring with them the best specimens of fruits, grains, vegetables, flowers, etc., that the exhibition may be made the more interesting.

The Halls of the Senate, and House of Representatives, the Supreme Court room, and committee rooms, will be open to receive the productions of the state; all of which will be exhibited during the session of the board. We are expecting some interesting essays and addresses during the meeting. JAMES A. WRIGHT,

*President of the Board,*

W. T. DENNIS, *Secretary.*

[Here will be another very interesting winter meeting, which others than those within the state may attend with profit, as those may remember who witnessed the show of fruits and grains last January, and heard the discussions upon various topics.—*En.*]

#### Independent Agricultural, Horticultural, and Mechanical Association, of Brown County, Ohio.

THIS society, whose efforts were noted in a previous number, has held its first horticultural fair, at Ripley, on the 10th of June ult.

It must be remarked, that the society is only six months old, and the members have separated from the parent society. The fair was the first of a purely horticultural character ever held in the county. The society hold two fairs each year. First in the spring, for horticulture alone; and, second, in the fall, for horticulture, mechanics, and agriculture. In addition to the above they meet every other month, to stir their minds by way of remembrance. A Campbell is president. The fair was better than any had a reason to expect, owing to the newness of the thing, and the drought. It gave general satisfaction. (Rev. J. Rat-

kin, whose cherries and rhubarb were so favorably recommended to notice, would have taken the premiums, but for an unintentional oversight of the awarding committee.) It appears from the premium list that the ladies have taken nearly all the prizes. Success is insured to any society which has the ladies so heartily enlisted in the cause.

Liberal premiums were awarded to the successful contributors of fruits, vegetables, and flowers, and the society have determined to hold a second fair, at Russellville, on the 25th of August.

#### South-Western Agricultural and Mechanical Association.

THE meeting of the friends of this great measure, held at the court-house, at Louisville, Kentucky, on Saturday, was largely attended by citizens of both city and county. The best spirit prevailed, and it was permanently organized.

A fair has been determined upon, and it behooves our citizens to give the association all the aid they possibly can, as it will eventually contribute much to the credit and prosperity of our city.

The organization of the society is now complete, and the prospect is, that its idea of a great western fair will be fully and effectually carried out. This is a consummation devoutly to be wished. Nothing could have a better influence upon the interests of agriculture in this part of the state, than such an exhibition as that which is proposed.

The Nashville, Wheeling, and other papers, all promise aid from their several states. Several gentlemen from Ohio, intimately allied with the great productive interests of that great state, have been in this city since the project was first broached publicly, and given it their most encouraging approval. That Ohio will be here, and lend her aid, there is no reason to doubt. Indiana is busy with her own State Fair, but after that closes she will show herself, and help also. From Illinois, Missouri, Arkansas, and Mississippi, but little except visitors can be expected at once; but by the second or third fair there will undoubtedly be important contributions from each of those states.

Judges will be chosen from all parts of Kentucky, Tennessee, Ohio, Indiana, Illinois, Missouri, etc. The time suggested has been October, when other fairs are generally over.—*Louisville papers.*

#### New York Agricultural College.

MESSES. JOHN A. KING, WM. KELLEY, and B. P. JOHNSON, the committee appointed from the Board of Trustees to report as to the purchasing of a farm for the Agricultural College, met at Mr. Delafield's, and reported in favor of purchasing the same at \$25,000. The report was accepted. This farm contains three hundred and fifty acres, in fine condition, with good varieties of soil, within three miles of the village of Geneva.

#### Resume.

THE department devoted to the acts of Horticultural and other similar bodies, has grown to quite a large size in consequence of the many points at which the spirit of emulation has stirred the people to make greater efforts in the cause of Horticulture. This spirit is doing good service, however, and has been manifested in other points also, which are not now mentioned, both because the space allotted would not contain the history, and because the parties most interested have failed to render the notes and papers, from which to make up the reports. Our own society has continued an active life of usefulness from week to week during the season.—*En.*

## Correspondence.

### NOTES ON THE JULY NUMBER.

*Virginia Creeper and English Ivy.*—Both beautiful vines; right glad to see them brought into notice. The creeper, particularly, is not cultivated as much as it deserves. It forms a beautiful covering for unsightly walls, and is particularly beautiful when dressed in its gorgeous autumnal foliage. We neglect many fine things that grow around us because of our familiarity with them. The creeper is a terror to many, who can not distinguish it from the "poison vine." The difference is obvious to the common observer, who will notice the number of leaflets. Why call it Virginia Creeper? that always meant the *Bignonia radicans*.

*Wax, or Tallow plant.*—If "a single plant will produce twenty-five to thirty pounds of berries, which produce twenty-five per cent. of wax," there can be no doubt that it would be a very profitable plant to cultivate. The wax is decidedly better than beeswax for many purposes, and as good for any—having the property of remaining sweet for a long time, together with its balsamic quality, it would be very desirable for pharmaceutical preparations; it certainly deserves attention.

*Water.*—How refreshing! to read an article on irrigation, with the thermometer at 98, and rain gage for last month 0. Yet we must first under-drain our lands, before we can indulge hopes of seeing the rank luxuriance this treatment affords at mid-summer. We are a progressive people, however, and the time is not distant when the use of water will be more general, and its advantages better understood.

*Wool from Wood.*—Yes, from veritable pine-tags, having the felting properties of

true wool; and then the medicated bath in connection. Some Yankee surely must have penetrated the wilds of Silesia, to have started this compound establishment. Good news for North Carolina, that. Who will be the first to commence a wood-wool and medicated bath establishment in her pine forests, and cause the health seeking invalid to turn his back upon Cape May and Rockaway, and seek the resinous residual waters of the wool factories in the pine woods?

*Strawberries and Raspberries.*—Mr. Longworth has accomplished much, and long may he live to do good by disseminating new and valuable seedlings, and rap the knuckles of those who attack his favorite theory, of the sexual characters of the strawberry. Facts will aid him in the warfare, and while with botanists the strawberry blossom may be as much of a monstrosity as a double rose, yet the practical cultivator, to succeed, must conform to the theory.

*Root Grafting vs. Budding.*—There seems to be quite an interest extant among pomologist, in regard to this matter, growing out of the fact, no doubt, that nurserymen have been in the habit of using small sections of roots, laterals, and all, frequently without fibers to graft upon. The consequence is, that instead of a fully branched, fibrous root, the young tree is sustained by a few large, rambling roots, which do not run into fibers until they are several feet from the tree, and thus in transplanting nearly all the fibers are left in the ground. There is no excuse for this practice, as apple seeds are easily obtained in any quantity, and the seedlings easily and quickly grown. If purchasers would refuse all trees that have not

good, fibrous roots, the evil would soon be corrected, and root-grafted trees become as popular as ever.

*Upland Cranberries.*—For many years this culture has been a matter of experiment, hitherto with doubtful success, and the culture has not been recommended. Mr. Orcutt seems to have been successful, and his success should encourage us to persevere. If generally practicable the culture of this fruit on upland soil would be exceedingly profitable.

*Wearing out of varieties of fruits.*—This theory, like many kindred ones, has had its advocates and opponents, each fortified in his position by known and admitted facts. It will probably remain an open question for some time yet. In some parts of the west the Pryor Red apple is pointed to as an example of the truth of Knight's theory, while all who have noticed it in these localities must admit its declining condition. Old orchardists will tell them that they remember the tree when it was a vigorous grower. In their localities the tree has been remarkably popular, so much so that nurserymen could not supply the demand for them. In every instance in which I have inquired, I learn that to supply this extraordinary demand, scions and stocks were used, which should have been rejected. If these facts do not account for its declining condition, they at least do not sustain Knight's theory. Let the advocates of the theory be industrious in collecting facts to sustain it, and let the Review and florists be equally industrious in collecting evidence against it—truth is mighty. May your reward be the satisfaction of exploding it, and substituting satisfactory explanations for all the facts which sustain it.

*Report from Illinois.*—A very interesting paper. Professor Turner wrote an article for the Horticulturalist, some time ago, de-

scribing an insect which he found on the bark of his pear trees, and which, from his observation, caused one species of blight, and, as in every case it was fatal to the tree, he, with commendable promptness, communicated his discovery to the public. His article was reviewed in rather an ill-natured style by some one, who evidently labored under the impression that entomology was an unheard of science so far in the direction of sun-down as Illinois, and thus the matter rests. This "report from Illinois," refers to the same insect. No one can doubt its existence, and we should keep a sharp lookout for this "pear devil;" hoping, however, most fervently, never to be indulged with a sight. Let the Professor and his neighbors exterminate them, and by watchfulness, this scourge may pass lightly away.

*Coal-Boat Garden.*—I have read of the hanging gardens of Babylon, and the floating gardens of Mexico, where wealth was ready to obey the orders of taste, but never should expect to see a garden on the deck of a coal boat; yet, meet it where you may, who does not feel a confidence in, and respect for the proprietor of a flower garden, increasing in proportion to the difficulties to be surmounted to attain it. No true lover of flowers can be a depraved man. I have often thought the love of flowers exhibited by Robespierre was affectation.

*Strawberry Seedlings.*—Poor Mr. Meehan is catching it right and left, for his heretical doctrine. It seems to be a free fight, and likely to be warmly kept up till the question is settled. I know of a German who raises the best strawberries in his neighborhood, and who is employed by many to set out beds, who professes to find male and female plants among all kinds. If called upon to set out Hovey's Seedling, for instance, he professes to believe it supplies its own impregnation, and that all the future care the

beds require is to keep the male Hovey's Seedling from overgrowing the bearing plants, and so with all other pistillate kinds. Whether he believes his own theory I do not know, but I know he has induced many more intelligent men to embrace his views.

*Grape Borders.*—A very sensible article, and a much more rational manner of making a border than the plan lauded by some—of planting the vines over decomposing masses of animal matter, rank enough to kill all vegetation that approaches it, and to make a man forswear eating grapes, unless assured they had not been raised on such a border.

P.

#### The Strawberry Question Settled.

DOCTOR WARDER:—We look to you Horticultural editors for correct views on Horticultural subjects, and hold ourselves as much bound by them, as by the opinions of our political leaders. Your brother of the *Prairie Farmer*, in his number for the present month, says: "Our beds of Pistillates, such as Hudson, Necked Pine, Hovey's Seedling, and others, have uniformly produced *Staminate* and partially staminate flowers, year by year. The early blossoms in all cases have been prevailingly staminate. We feel bad for our Cincinnati friends, especially for the old veteran of strawberryism, Mr. Longworth, whose gray hairs will be in danger of coming down with sorrow to the grave, should his darling theory die." You editors will, of course, all yield to the opinion of your experienced brother. But I fear that the little children of our market gardeners, with their usual folly, will laugh at this doctrine of your brother. And, to bring the question to the test, and prove the wisdom of your brother, I make the following proposition: I will place from \$1000 to \$5000 (your brother to name the sum,)

in the hands of Mr. Buist and Dr. Brincklé, of Philadelphia, two of our most skillful Horticulturists, and your brother to deposit half the sum that I deposit. If the plants your brother deposits are by them pronounced the kinds represented, and all the blossoms are not pure pistillates, and incapable of bearing fruit, without husbands, they shall pay over to your brother the sum I deposit. If pronounced not the kinds named, I will pay his deposit to the Directors of our Orphans' Asylum. To lose \$5,000 may increase greatly the gray hairs of a Jerseyman, but greater will be his regret, that it will compel him to become a convert to all the Rochester knocking miracles that we daily hear of. Mr. Meehan has not got the true Extra Red. It is a seedling of my raising. Your brother states that Mr Meehan says this plant produces *as many* perfect as pistillate blossoms. I have never seen one on my plants. As Longworth's prolific (which is hermaphrodite) produces a chance pistillate blossom, I see no reason for saying that there may not be a pistillate, bearing an occasional hermaphrodite or staminate blossom,

N. LONGWORTH.

#### A New Catalpa.

During a recent visit to the beautiful city of Dayton, when attending the meeting of the State Medical Society, about June 7th, my attention was attracted by a variety of the *Bignonia Catalpa*, then in full bloom, though those I had left in Cincinnati were just showing their young buds. I was told that this was a distinct variety, supposed to have originated there. That the early bloom was not accidental, was very apparent, for the trees were varicously situated as to soil and exposure. The foliage is larger and finer, the form of the tree rather better, and the trusses of earlier flowers more showy

than usual. My kind friend Steele, who has fine specimens in his beautiful city garden, has furnished the subjoined note that contains all information respecting the variety, which he has been able to obtain. Ed.

DAYTON, June 13th, 1853.

DR. J. A. WARDER, DEAR SIR:—During your recent visit to Dayton you noticed and admired a variety of the Catalpa which is quite common here. We have long known that we had two kinds of this tree, but supposing that they were both cultivated in Cincinnati and elsewhere, we have made no note of the fact. The two varieties differ in several particulars, but the most striking peculiarity consists in the time of blossoming. On our public square, where the two kinds stand side by side, under precisely similar circumstances of soil and exposure, the one has been in full flower for ten days, while the other has not yet opened a single blossom. The bark of the young trees of the new kind is also lighter in color, the foliage is of a deeper green and more luxuriant, the seed pods much longer, the form of the tree more upright and compact, and the flower larger and of a purer white.

We are indebted to Dr. J. Haines for the introduction of this fine variety here. Some years since he noticed two Catalpa trees growing on a farm two miles south of this place, and was struck with their superiority to the kind then commonly planted. He procured seed from these trees, and, from this source, all the fine specimens of this

kind which now adorn our city, originated. The family who lived on the farm and planted the original trees, have since removed from the neighborhood, and it is unknown where they obtained them.

Yours truly, ROST. W. STEELE.

July 9, 1853.

FRIEND WARDER:—In your July number there is an article from Mr. Longworth, in the latter part of which he commits (what is very uncommon for him) a *faux pas*. He therein states, that I have recently enumerated all the varieties of strawberries I deem valuable, and that I omitted all the Cincinnati seedlings. I have done no such thing, but have done exactly the contrary. The descriptive list to which Mr. L. alludes was sent entire to the Horticulturist, but the editor, for convenience, divided it into two parts, and Mr. L. must have perused only the first part, as the Ohio varieties are described fully in the second part.

I think Mr. L. somewhat wanting in his usual perspicuity, by his not noticing the concluding words of the first section, where it says, "*To be continued.*" It will be seen that I have made quite as favorable comments upon the Cincinnati varieties as he would himself have done, and McAvoy's Superior I consider as worthy the most favorable encomiums, its only deficiency as a market fruit being its dark color.

Most respectfully, WILLIAM R. PRINCE.

## Editorial.

### THE FRONTISPIECE,

The main building is 44×36 feet, on the ground. The cellar wall may show 18 to 24 inches above the ground, and be pierced by windows in each end. The height of the main walls may be two full stories below the roof plates, or the chambers may run a



foot or two into the garret, at the choice of the builder.

The front door opens from a veranda 28 feet long by 10 feet in depth, dropping eight inches from the door-sill. This veranda has a hipped roof, which juts over the columns in due proportion with the roof of the house over its walls. These columns are plain, with brackets, or braces from near their tops, sustaining the plate and finish of the roof above, which may be covered either with tin or zinc, painted, or closely shingled.

The walls of the house may be 18 to 20 feet high below the plates; the roof a pitch of 30 to 45°, which will afford an upper garret or store, or small sleeping rooms, if required; and the eaves should project two to three feet as climate may demand, over the walls. A plain finish—that is, ceiled underneath—is shown in the design, but brackets on the ends of the rafters, beaded and finished, may be shown, if preferred. The gables are *Swiss-roofed*, or *truncated*, thus giving them a most sheltered and comfortable appearance, particularly in a northerly climate. The small gable in front relieves the roof of its monotony, and affords light to the central garret. The chimneys are carried out with partition flues, and may be topped with square caps, as necessity or taste may demand.

Retreating three feet from the kitchen side of the house, runs, at right angles, a wing 30×18 feet, one and a half stories high, with a veranda eight feet wide in front. Next in rear of this, continues a wood-house, 30×18 feet, one story high, with ten feet posts, and open in front, the ground level of which is 18 inches below the floor of the wing to which it is attached. The roof of these two is of like character with that of the main building.

Adjoining this wood-house, and at right angles with it, is a building 68×18 feet.

This building is one and a half stories high, with 12 feet posts, and roof in the same style and of equal pitch as the others.

#### INTERIOR ARRANGEMENT.

The front door from the veranda of the house opens into a hall, 18×8 feet, and 11 feet high, amply lighted by sash windows on the sides and over the door. From the rear of this hall runs a flight of easy stairs, into the upper or chamber hall. On one side of the lower hall, a door leads into a parlor, 18 feet square, and 11 feet high, lighted by three windows, and warmed by an open stove, or fireplace, the pipe passing into a chimney flue in the rear. A door passes from this parlor into a rear passage, or entry, thus giving it access to the kitchen and rear apartments. At the back end of the front hall, a door leads into the rear passage and kitchen; and on the side opposite the parlor, a door opens into the sitting or family room, 18×16 feet in area, having an open fireplace, and three windows. On the hall side of this room, a door passes into the kitchen, 22×16 feet, and which may, in case the requirements of the family demand it, be made the chief family or living room, and the last one described converted into a library. In this kitchen, which is lighted by two windows, is a liberal open fireplace, with an ample oven by its side, and a sink in the outer corner. A flight of stairs, also, leads to the rear chambers above; and a corresponding flight, under them, to the cellar below. A door at each end of these stairs, leads into the back entry of the house, and thus to the other interior rooms, or through the rear outer door to the back porch. This back entry is lighted by a single sash window over the outside door leading to the porch. Another door, opposite that leading down cellar, opens into the passage through the wing. From the rear hall, which is 16×5 feet, the innermost part

sage leads into a family bedroom, or nursery, 16×14 feet, lighted by a window in each outside wall, and warmed by an open fireplace, or stove, at pleasure. Attached to this bedroom is a clothes-closet, 8×4

feet, with shelves, and drawers. Next the outer door, in rear end of the hall, is a small closet opening from it, 6×4 feet in dimensions, convertible to any use which the mistress of the house may direct.

### METEOROLOGICAL TABLE.

CINCINNATI, JUNE, 1853.

THERMOM.			WEATHER.			RAIN.	Date.	WINDS, &c.	
Date.	Min.	Max.	Sunrise.	Noon.	Sunset.				
1	58	89	clear . . .	clear . . .	clear . . .	....	1	Calm; light SE. Calm.	
2	70	87	do. . . . .	do. . . . .	cloudy . . .	....	2	Calm; light S; brisk S. (fire flies.)	
3	74	94	do. . . . .	do. . . . .	clear . . . .	....	3	Light SW; brisk SW.; light W. (Sun 118°)	
4	69	86	do. . . . .	variable.	do. . . . .	....	4	Calm; light SE; calm.	
5	70	90	do. . . . .	clear. . . .	variable . . .	....	5	Calm; light S; calm.	
6	73	89	do. . . . .	var. rain	do. . . . .	1.14	6	Calm, Brisk S. and SW.	
7	66	78	do. . . . .	clear. . . .	clear . . . .	....	7	Light W.; brisk W.; light NW.	
8	58	81	do. . . . .	do. . . . .	do. . . . .	....	8	Calm; light NE.; calm.	
9	59	87	do. . . . .	do. . . . .	do. . . . .	....	9	Calm; light S.; brisk S.	
10	66	90	do. . . . .	do. . . . .	do. . . . .	....	10	Light SW., S., and SE.	
11	68	91	do. . . . .	do. . . . .	do. . . . .	....	11	Calm; light SE.; sun 120 deg.	
12	71	94	do. . . . .	do. . . . .	do. . . . .	....	12	Calm; light SE.; sun 124 deg.	
13	69	93	do. . . . .	do. . . . .	do. . . . .	....	13	Calm; light SE. and variable; calm.	
14	72	94	do. . . . .	do. . . . .	do. . . . .	....	14	Calm; variable; calm.	
15	75	94	do. . . . .	do. . . . .	variable . . .	....	15	Calm; light W. and E. (Raspberries.) Sun 123°	
16	71	94	do. . . . .	do. . . . .	rain. . . . .	.02	16	Calm; light S. and SW.	
17	70	89	do. . . . .	do. . . . .	clear . . . .	....	17	Light W.; brisk W.; light W.	
18	65	90	do. . . . .	do. . . . .	do. . . . .	....	18	Light NW.; brisk W.; light W. (Tomatoes.)	
19	65	95	do. . . . .	do. . . . .	do. . . . .	....	19	Light W. and S. Sun 124 deg.	
20	68	97	do. . . . .	do. . . . .	do. . . . .	....	20	Calm; light S.; brisk S. Sun 130.	
21	75	94	do. . . . .	variable.	cloudy . . . .	....	21	Light S.; brisk S. and SW.; light W.	
22	76	94	cloudy . . .	clear . . . .	variable . . .	.64	22	Light S; brisk S.; high S.; light S. Rain at night.	
23	72	82	cloudy, rain	variable.	do. . . . .	.10	23	Light S; brisk SW.; high W.; light W.	
24	62	77	clear . . . .	clear . . . .	clear . . . .	....	24	Light NW.	
25	63	79	cloudy . . .	do. . . . .	do. . . . .	....	25	Calm; light NW. (Blackberries.)	
26	58	87	clear . . . .	do. . . . .	do. . . . .	....	26	Calm; light S.	
27	70	92	do. . . . .	do. . . . .	do. . . . .	....	27	Calm; light SW.; brisk SW.; light SW.	
28	75	96	do. . . . .	do. . . . .	do. . . . .	....	28	Light SW.; brisk W.; light SW.	
29	76	98	do. . . . .	do. . . . .	do. . . . .	....	29	Calm; light SW.; brisk SW.; light W. Sun 122.	
30	76	98	do. . . . .	do. . . . .	do. . . . .	....	30	Calm; light SW. and W; brisk SW.; light S (Corns.)	
Rain in the month, inches,						1.90	Clear days in the month, . . . . .		
Mean temperature of the month, . . . . .						79.32	Variable—sun visible, . . . . .		
do. do. June, 1852, . . . . .						72.36	Cloudy—sun not visible, . . . . .		
do. do. do. 1851, . . . . .						73.94			
do. do. do. 1850, . . . . .						76.29			
do. do. do. 1849, . . . . .						76.86			
do. do. do. 1848, . . . . .						72.14			
do. do. do. 1847, . . . . .						70.36			
do. do. do. 1846, . . . . .						69.84			
do. do. do. 1845, . . . . .						74.—			
do. do. do. 1844, . . . . .						73.20			
do. do. of all the above, . . . . .						73.84			

Mean temperature of the month, . . . . .	79.32
do. do. June, 1852, . . . . .	72.36
do. do. do. 1851, . . . . .	73.94
do. do. do. 1850, . . . . .	76.29
do. do. do. 1849, . . . . .	76.86
do. do. do. 1848, . . . . .	72.14
do. do. do. 1847, . . . . .	70.36
do. do. do. 1846, . . . . .	69.84
do. do. do. 1845, . . . . .	74.—
do. do. do. 1844, . . . . .	73.20
do. do. of all the above, . . . . .	73.84

REMARKS.—This has been a very hot and dry month; the temperature is near six degrees above the mean for June the last ten years; and the quantity of rain falls short about two-thirds of the usual average, which, added to the almost incessant diurnal sunshine, has produced so rapid an evaporation as to cause a vast reduction of the growing crops, (wheat excepted) reducing the supply of seasonable vegetables in the market some 50 to 100 per cent.

The mean temperature of the month is two degrees higher than that of July for the last ten years.

Several thermometers exposed, in well-shaded situations, did not indicate over 94 and 95 deg. on the 29th and 30th.

Several kinds of fruits and vegetables appear earlier than usual in the market this season, by reason of the unusual heat.

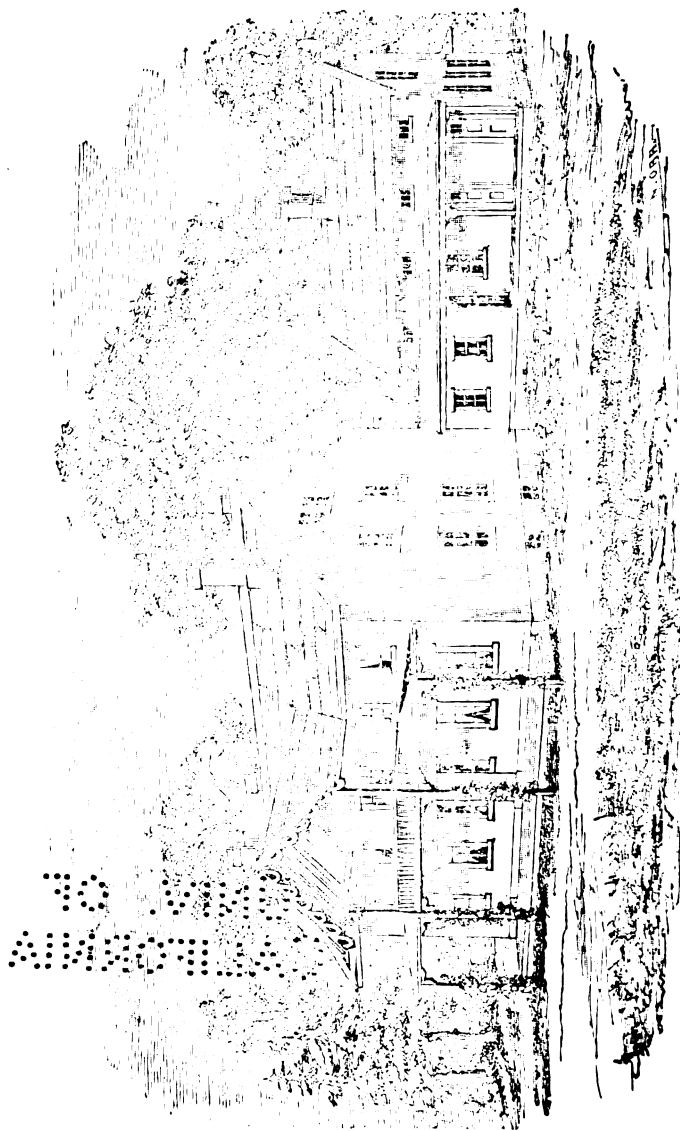
The fire-fly is usually seen ten days in the country before we detect it in town.

The thermometer, exposed to the sun's rays, has not indicated so high a temperature as might have been expected from a range of 90 to 98 degrees in the shade—a slight haze may have been the cause. I have seen it mount to 149 degrees in Tennessee in the sun. In a course of sixteen years' observations at this city, I have never had occasion to record a higher temperature than 98 degrees (blood heat) in the shade.

The mercury has ranged as high as 90 degrees and over eighteen times, which, I believe, is altogether unprecedented in this month.

JOHN LEA.

Univ. of  
CALIFORNIA



A Plantation House.



Vol. III.

SEPTEMBER, 1853.

No. 12.

## Miscellaneous.

### CLOSE OF THE THIRD VOLUME.

**T**HIS number will complete the third yearly course, during which, gentle reader, I have endeavored to devote my best energies to thee, in the hope of encouraging thy horticultural proclivities, and, so far as a moderate ability might enable, the attempt has been made to direct thy taste, to increase thy skill, and to add to thy knowledge. Unwilling as I am to make any personal allusions, I must necessarily refer to myself, in reminding thee, kind friend, of the extreme hesitation with which the editorial tripod was ascended, at the commencement of the enterprize, and that a becoming modesty has been cultivated ever since.

It must have been apparent, to every reader of these pages, that with whatever demerits the management of the work has been associated, the charge of subservency to any clique or private interests can not be brought against me; in the language of the day, it may be said, "I have had no ax to

grind," having been actuated, in this whole enterprize, by the motive of conferring a public benefit upon my countrymen, prompted, at the same time, of course, by a laudable desire for the modicum of fame that might attach to the success of the undertaking. I feel proud in being able to say, that in one sense, at least, that success has been my reward, whether dependant upon the facility with which my readers have been pleased, or the energy of the efforts made for their gratification, it is not for me to decide; suffice it, the latter is well known to myself, and the former has been evidenced by very numerous communications, of the most flattering character, which have been repeatedly sent to cheer the weary labors of the toiling Editor; these have not been pruriently protruded upon the public, in frequent repetitions of the friendly puffs, and are now alluded to rather in discharge of a debt of gratitude due to my kind friends, than in any spirit of boasting. No, I trust they have not spoiled me, and I take this

opportunity also, to assure you that no one can be more sensible than myself, of the many deficiencies that have occurred, especially within the last few months; the explanation and apologies for these have already been presented as arising from the recurrence of maladies which have proved beyond control.

With the close of this Third Volume, I shall feel obliged to take, at least, a respite from these arduous labors; pleasant tho' they be, they have proved too much for me during the last year, therefore it becomes necessary to suspend them for the present. My pleasant connection with you can not be broken off without a great effort; the Review has been a darling with me, and through it I have been the recipient of many kindnesses and courtesies, which have been most gratifying. I can not, therefore, relinquish the pen that has maintained the connection with so many pleasant friends, but shall hope to continue sending you an extra, or bulletin, from time to time, until my health and the attendant circumstances of publishing a monthly work of this character justify my resuming the place, which is confidently hoped may be with the opening coming year, when I may be able to send you the compliments of the season, in the shape of the first number of Volume Four.

#### Concrete Walks.

LATE in March, all through April and May, is the best time to make concrete walks; four inches, or at most five inches, is deep enough for any walk whatever. If it is to be ten feet wide, and the materials are scarce, or dear, the bottom should be formed into the same shape as the walk is to be finished, or, say two inches higher in the middle than at the sides, before any of the materials are laid on. The old way of draining the center of a walk, by drawing in the

water from right and left, is radically bad in principle, and will not answer the concrete system at all, as the dryer the bottom, the firmer the walk, and the longer it will endure. On very heavy clay land, where chalk and gravel are dear, burnt clay will make an excellent and enduring bottom to a walk, and three inches of the burnt clay should first of all be put in the bottom, and be well rolled in dry weather, then two inches of the concrete on the top, this is to be well rolled also, and to be heavily watered the last thing in the evening, then, the following morning, a *very thin* layer of fine sifted gravel, of good color, should be laid on the top of the damp concrete, and the roller passed over it several times until the good gravel is thoroughly imbedded in the concrete, and forms part of it, as it were; when the concrete is very wet, and the good gravel over it too thinly put on, the weight of the roller will cause the white juice of the concrete to come up through the gravel, and that is the best sign. To hide that, put on a little more gravel, and roll again, and when the whole is dry, in two or three days, a pick could hardly break the surface.

On light, dry lands, four inches is deep enough for walks, and the first two inches at the bottom may be laid with any of the rough materials, without chalk or lime, and the next two inches in concrete. The roller will press this sufficiently to allow a slight coat of clean good gravel on the top, without the walk being more than four inches deep in the whole.

The concrete is made with any coarse gravel, with the largest stones taken out or broken, five parts or loads, and one part of fine chalk, all mixed well together, and put on the walk, then well watered. In dry weather, this is soon dry enough for the roller. The usual way is to begin this in the morning, and water every three or four yards in length as soon as the mixture is got in, and so on till towards four o'clock in the afternoon, when the whole is ready for the roller, or if it is not dry enough that day, to keep on till six o'clock, and roll it the first thing next morning, and then to put the fine gravel on and roll again immediately; if the concrete is too wet, it will stick to the roller, and after rolling, if it is allowed to get dry before the coloring gravel is put on, the fine

gravel will not stick to the concrete, so that the state of the weather has much to do with the perfect success of the operation, and wet weather is much against it.

We calculate, generally, that one part, or load, or bushel of lime, will go as far in concrete as two parts of chalk; then, instead of five of gravel to one of chalk, we allow ten of gravel to one of lime, but that is the extreme; when lime or chalk is to be had cheap, more of both should be used than these proportions. We have used as much chalk as one part for three parts of gravel, and one of the best walks we ever saw had more than a yard deep of clean chalk in the bottom, because the chalk was at hand, and the bottom soil was more useful in filling up round about—and on the top of the chalk less than two inches of the concrete. In all such cases, however, the first frost next autumn blistered the chalk, and caused it to rise through the surface in icicles; but after the frost, when the walk got dry, the roller settled the whole down again, and after that, we never knew the frost to affect it any more. The same blistering takes place when the concrete is made too fat, as they say; that is, when too much chalk or lime was used for the proportion of gravel. In such cases it was found necessary to sprinkle the surface with fresh gravel when all the frost for that season was over.

In all this, we are only answering questions on the subject, and have met all but the last question that we remember, and that is about freshening up concrete walks. When the surface of a concrete walk gets bare of fine gravel by long usage, or much sweeping, it turns to a light color. Again, when a concrete walk is in a part where it is liable to get dirty on the top in winter, and it is necessary to scrape off the dirty surface in the spring, it will not do to lay a very thin coat of fresh gravel on the top. If the bottom is dry at the time, one might as well think of getting Scotch snuff to stick to an English pavement, as to do that. The concrete bottom must be thoroughly wetted, so that a finger could mark it, then the fresh gravel, and immediately the roller; and the whole will unite, and soon be as hard as a concrete walk. Once more—if a thunderbolt falls, and makes a hole or great scratch in the surface of a concrete walk, one must not expect to mend it with so much gravel,

let it be ever so good. Clear away the sides till all loose particles are got rid of, then put down four parts of gravel and one part of chalk, and work them with water to a stiff paste or mortar, and fill up with this—smoothing the top with the back of the spade; then sweep as much from the walk as will cover the patch, strike the back of the spade on this, and no one can perceive the difference.

D. B.

—*Cottage Gardener.*

#### Poetry of the Vegetable World.

As indicated in the title, this is a popular exposition of the science of botany and its relations to man. The original work consisted of a number of essays or lectures prepared for a cultivated circle of the highest society in Germany, by the distinguished botanical Professor, M. J. Schleiden, of the University of Jena. When persuaded to present them in the printed form, the book was entitled *Plant-World*. An English translation soon appeared in London, prepared by Arthur Henfrey, F. L. S., entitled *The Plant, a Biography*, from which our western editor, Alphonso Wood, A. M., has produced the *Poetry of the Vegetable World*. Do not be alarmed at the change of title to which this pleasant book has been subjected, it is the *Plant-World* still, a book of poetry; the author desires us no longer to consider "the Botanist as a dealer in barbarous Latin names, a man who plucks flowers, names them, dries and wraps them up in paper, and whose sole wisdom is expended in the determination and classification of this ingeniously collected hay."

The author treats of Theoretical, or Pure Botany, in which he considers the condition of the plant itself, as a matter of scientific enquiry; Systematic Botany, which treats of the relations of different plants to one another, and serves as an ingenious expedient for surveying the 200,000 distinct species; and Geographical and Applied Botany,

through which are studied the relations of plants as organisms to the organism of the whole earth, and the relation of the human race to the vegetable world. As each of these four relations is fulfilled by the plant at one and the same time, it is almost impossible to investigate one alone, but we involuntarily examine them conjointly; in the words of the author, the companionship in which we wander through the land of science, induces us often times to leave the straight, but dusty and fatiguing high-road, now to pursue our course among lanes which wind among pleasant meadows, now to explore a shady forest path.

In the present edition we are indebted to the Cincinnati editor for a very full table of contents of the diversified topics treated in the various chapters. The first, is upon the Eye and the Microscope, explains the theory of light, the color of the leaf, the principles upon which the microscope is constructed, the microscopic aid to science, and the microscope in botany. The second chapter, entitled the Internal Structure of Plants, informs us that they are various in Form, Duration, and Texture,—explains the vegetable cells, forms, structure, and propagation; and next, their peculiarities in the different portions of the two great divisions of vegetables. Chapter third explains the Propagation of Plants, compares the seed and the egg, and makes every plant originate from a cell, whether it appear through the intervention of a seed, or a bud. In chapters five and six, in which the question is asked, "What does man live upon," some very interesting answers and deductions are presented, and the relations of man's habits to his food are given, "whether he be milk-fed, rice-fed, or fat-fed."

The preparation of the earth for the support of vegetables is thus beautifully portrayed:

"Look at a recently exposed surface of a

block of granite, for instance, on the summit of the Brocken; there we find that vegetation is soon developed, in the form of a little delicate plant, which requires the microscope for its recognition; and this is nourished by the small quantity of atmospheric water impregnated with carbonic acid and ammonia. This is the so-called Violet-stone, a scarlet, pulverulent coating over the bare rock, which, on account of the peculiar smell of violets which it emits when rubbed, has become a curiosity, industriously sought by the thoughtful wanderer on the Brocken. By the gradual decay and decomposition of this little plant, a very thin layer of humus is by degrees produced, which now suffices to procure from the atmosphere, food sufficient for a couple of great blackish-brown lichens. These lichens, which densely clothe the heaps of earth round the shafts of the mines of Fahlun and Dannemora in Sweden, and through their gloomy color, which they impress on all around, make those pits and shafts look like the gloomy abysses of Death, have been appropriately called by the botanists the Stygian and Fahlun Lichens. But they are no messengers of death here; their decay prepares the soil for the elegant little Alpine Moss, the destruction of which is speedily followed by the appearance of greener and more luxuriant mosses, until sufficient soil has been formed for the Whortleberry, the Juniper, and finally for the Pine. Thus from an insignificant beginning, an ever-increasing coating of humus grows up over the naked rock, and a vegetation, continually stronger and more luxuriant, takes up its position, not to be nourished on that humus, which increases instead of decreasing with every decaying generation, but by its means to be supplied with nourishment from the atmosphere.

[The author appears to have overlooked the additions to this humus, of mineral ingredients for the plant structures, that are derived from the decomposition of the rocks themselves.]

"Boussingault brings forward a still more interesting example. In his first sojourn in America, he visited a spot in the neighborhood of La Vega de Supia, which, during his stay, was converted by an earthquake into a waste surface of fragments of por-



phyry, whereby all vegetation was destroyed, and buried many fathoms deep beneath the rocks. When he returned to the same spot, after an absence of ten years, the wild and bare masses of rock were already clothed with a young, luxuriantly-vegetating Acacia grove. And without doubt, the rock-islands arising by volcanic force from beneath the floods of the ancient ocean, at a period which lies hundreds, thousands of years beyond the human history of our globe, were gradually clothed in a similar manner with vegetation, until, in favorable places, those masses of humus were at last accumulated, which serve as the luxuriant substratum of the inexhaustible vegetable life of the primeval forests of the tropics. In this physical property of humus, and not in its chemical constituents, we have to seek the reason why a more luxuriant vegetation thrives upon a soil rich in humus, than on one in which an admixture of this substance is wanting."

Chapter eight tells about the milk-sap of plants, its color, and constituents, from the invaluable Caoutchouc to the terrible poisons of Manchineel, Woarara, Nux Vomica, and Bohan Upas. Associated with the poison juices of the spurge-worts, we find, strangely enough, a most wholesome food, which, throughout all the hotter part of America, is substituted for our white bread and rice, the Tapioca, which is prepared from that most poisonous plant, the Mandioc-root, or *Jatropha Manihot*. A fine description of a tropical forest is given as follows:

"Two very different trees grow in those little visited primeval forests of Java. All the paths leading to them are closed and watched, like those leading to the gates of the Holy of Holies. With fire and ax must the road be made through the impenetrably interwoven mass of Lianes, the Paullinias, with their clusters of great scarlet blossoms several feet long, the Cissi or wild Vines, on the wide-spread creeping roots of which thrives the giant flower of the *Rafflesia Arnoldi*. Palms, with spines and thorns, Rush-like plants, with cutting leaves, wounding like knives, warn the intruder back by their attacks, and in every part of the thicket threaten the fearful Nettles formerly men-

tioned. Great black ants, whose painful bite tortures the wanderer, countless swarms of tormenting insects pursue him. Are these obstacles overcome? yet follow the dense bundles of Bamboo stems, as thick as a man's arm, and often fifty feet high, the firm glassy bark of which repels even the ax. At last the way is opened, and the majestic aisles of the true primeval forest now display themselves. Gigantic trunks of the Bread-fruit, of the iron-like Teak, (*Tectona grandis*), of *Leguminosae*, with their beautiful blossoms, of Barringtonias, Figs and Bays, form the columns which support the massive green vault. From branch to branch leap lively troops of apes, provoking the wanderer by throwing fruit upon him. From a moss-clad rock the melancholy Orang-outang raises himself gravely on his staff, and wanders into deeper thickets. All is full of animal life; a strong contrast to the desert and silent character of many of the primeval forests of America.

"Here a twining, climbing shrub, with a trunk as thick as one's arm, coils round the columns of the dome, overpassing the loftiest trees, often quite simple and unbranched for a length of a hundred feet from the root, but curved and winding in the most varied forms. The large, shining green leaves alternate with the long and stout tendrils with which it takes firm hold, and greenish-white heads of pleasant smelling flowers hang pendent from it. This plant, belonging to the *Apocynaceae*, is the *Tjeliek* of the natives (*Strychnos Tieute*, Lesch.) from the roots of which the dreadful *Upas Radia*, or Sovereign Poison, is concocted. A slight wound from a weapon poisoned with this,—a little arrow made of hard wood, and shot from the blow-tube, as by the South Americans,—makes the tiger tremble, stand motionless a minute, then fall as though seized with vertigo, and die in brief but violent convulsions. The shrub itself is harmless, and he whose skin may have been touched with its juice need fear no consequences.

"As we go forward, we meet with a beautiful slender stem, which overtops the neighboring plants. Perfectly cylindrical, it rises sixty or eighty feet smooth and without a branch, and bears an elegant, hemispherical crown, which proudly looks down on the more humble growths around, and the many climbers struggling up its stem. Woe to

him who heedlessly should touch the milk-sap that flows abundantly from its easily wounded bark. Large blisters, painful ulcers, like those produced by our poisonons Sumach, on'y more dangerous, are the inevitable consequences. This is the *Antiar* of the Javanese, the *Bihon Upas* (signifying Poison-tree) of the Malays, the *Ipo* of Celebes and the Phillippines, (*Antiaris toxicaria*; Lesch.) From it comes the common Upas, (*anglice*, poison,) which is especially employed for poisoning arrows, a custom which appears to have extended formerly throughout all the Sunda Islands, but which is now, since the introduction of fire-arms, only to be met with among the savages of the rugged and inaccessible mountains of the interior of the islands."

This chapter concludes with these reflections :

"We shall not envy the inhabitant of the tropics the milk of his Cow-tree—and, content with the gift of the useful Caoutchouc, we readily resign the luxuriant nature of those regions, which have so much of the terrible mingled with their beauty. No remedy yet restrains the operations of those poisons ; like the destroying *Ænigma*, they oppose themselves to the human race, and make good the proposition, that the bright lights of tropical nature necessitate black shades among them, and that more than one Dragon watches these gardens of the Hesperides."

The Geography of Plants occupies an important portion of the work, in which the reader is carried from the iceberg of Baffin's Bay, with its Arctic flora, through the zones of the Conifers, Deciduous and Evergreen Woods, to that of the Tropical flora. In this investigation we are shown the necessity of the study of climate, and of Isothermal lines, not coincident with parallels of latitude, but depending upon the physical conditions of the globe, influenced by soil, water, and other circumstances. We here also find a sketch of the distribution of the most important plants yielding food, which is possessed of much interest.

In the next chapter, upon the history of

the Vegetable World, the author looks into the geological history of our globe, in which he especially traces its progressive vegetation, and marks the changes of climate as indicated by the different tribes of fossil plants preserved in successive formations. He here also sets forth a theory that varieties may form sub-species, which may pass into distinct species, and even suggests that all species may have sprung from one. This, in the present age, appears too much like a retrograde movement, and merely a modification of the absurd Lamarckian theory of developments, which has been fully refuted. The conclusion of this chapter is devoted to the nativity of the food-plants, the changes affected in them by cultivation, the distribution of species, both by human and natural means, and the changes of climate, with their effects upon plants.

In the last chapter we have the *Æsthetics* of the Vegetable World. Here we find poetry in plenty, and withal some mysticism. The author traces in plants symbols of Immortality, of Fertility, of Divinities, of Love, Honesty, &c., and traces the meanings of vegetable forms ; he himself, however, acknowledges that the subject is obscure ; with him, in his attempts to analyze beauty, we may quote this couplet :

"Where all the wisdom of the wise man leaves him blind,

There plays in free simplicity, the child-like mind."

And thus suppose that in such investigations the further we proceed beyond the limited range of facts into the regions of speculations, the less light we find attends our investigations. For, as Mephistopheles says in regard to light :

"From matter streaming it makes matter bright,  
Matter arrests it on its onward flight—  
And so I fancy 'twill but have its day,  
And when the matter vanishes, so fade away."

Notwithstanding the defects, whether traceable to the author or his translator, the

work is delightful, and the reader will rise from its perusal more favorably impressed with the study of botany, and better acquainted with the æsthetics of the Vegetable World. The appearance of the book is attractive; distinct type, and clear, white paper are essential ingredients to literary comfort, and the reader must acknowledge himself indebted to Moore, Anderson & Co. for so pleasant a treat as they have furnished.

#### Coniferæ.

**PROPAGATION: BY CUTTINGS.**—A cutting is a small twig, or shoot, taken from a living tree, to form, when rooted, a separate individual capable of growing to the same size as the tree it is taken from, and also, when old enough, of bearing seeds. The reason, in general, why we increase by cuttings is because the tree or shrub so propagated is either too young to produce seeds, or will not produce seeds in this country. This is especially the case with the more rare or lately imported Conifers; as, for instance, the Funereal Cypress of China, and the *Cryptomeria* from Japan, both of which strike root from cuttings easily, and soon form young trees with leading shoots and side branches in all points equal to seedlings. It is quite true there are some that will root easily enough, but do not so easily form a perfect tree—some remaining with only side branches, and never attaining a central leading shoot. The *Araucaria excelsa* is an instance, and also the *Pinus nobilis*, and one or two others. I once saw an *Araucaria excelsa* that, when imported from Norfolk Island, had on it two leading shoots. The skillful propagator at Pine-Apple Place (Mr. Fancourt) took off one of the leading shoots, put it in as a cutting, and rooted it in a very short time. It grew apace, and formed as perfect a tree as the one from which it was taken. This gives us a practical hint how to obtain such perfect trees. All we have to do is to take out a central shoot, and thus induce several leaders, which may be taken off as soon as formed, and put in as cuttings.

The way to manage cuttings of Coniferæ is first to prepare a pot to put them in; drain it well, and cover the drainage with a little moss; then fill the pot to within an inch of

the top with a compost of loam and sandy peat, mixing it freely with sand; upon this place an inch of pure sand, watering it gently to settle it and make it firm. Then prepare the cuttings—take them off the tree just at the point where the last made wood joins to the wood made the previous year; trim off, without wounding the bark, the lower leaves, or branches, if any, and insert the cuttings in rows across the cutting pot till it is full. The best time to do this is about the month of October, though they will do pretty well even up to the March following. Water the cuttings gently, and allow the tops to dry; then place them in a very gentle hotbed, just warm enough to cause them to form a swelling at the base, but not so hot as to induce shoots, unless the operator has the convenience of a greenhouse to harden them off. They do not require bell-glasses, or, at least, will root very well without them. I have just now several pots of cuttings of this tribe, that are rooting beautifully in a gentle hotbed set upon coal ashes, without any bell-glasses, and scarcely one has failed.

In putting in cuttings of Coniferæ in the above manner, I refer more especially to the more rare kinds, such as the *Cryptomerias*, some *Cypresses*, *Taxodium sempervirens*, *Arbor vitæ*, and some of the genus *Taxus*. Others that are more common may be successfully propagated by cuttings put in early in the autumn, under hand-glasses, on a northwest border, where the sun leaves them about ten o'clock. For such the ground should be prepared in a similar way to that in the cutting pots, and the cuttings put in by the same method. The hand-glasses should be kept on through the winter, and removed as soon as they begin to grow in spring. If labor is no object, these cuttings may be taken up and potted in small pots, and placed under a cold frame to encourage free growth, only take care to plant them out in nursery rows before the roots become matted round the pot sides. Should any of them have done so, carefully disentangle them, spreading the roots out equally on every side. These remarks on potting off the cuttings apply equally to those struck in pots on the hotbed.

The very commonest of Coniferæ may be propagated by cuttings in a still more summary way. As soon as the annual growth

is perfected, take off the cuttings, and plant them in rows across a shady border, making them very firm in the soil. The kinds that will grow by this simple means are the Irish Yew and its varieties, the common *Arbutus*, the Swedish Junipers, and most other small-leaved varieties that are very hardy. The large-leaved Conifers do not strike easily by cuttings, but must, where seed can not be procured, be propagated by grafting, of which I shall write by-and-by.

No method of propagating this fine tribe is, however, so satisfactory as that by seed. Many of our readers are, no doubt, aware that great quantities of seeds are annually imported into this country, and from these we obtain abundance of young plants. Government has even paid some attention to this point, and has appointed four eminent nurserymen to raise the seedlings (I refer to the Deodar Cedar from the Himalaya mountains) to be planted in the Royal Forests. From this we must infer that the Commissioners of Woods and Forests either have no means of raising the seeds, or no men skillful enough to entrust them to.

I have been led away, by the above remarks, from my subject, and am tempted again to digress to inform our readers, growers of Conifers, that there is, in Scotland, a society established for the purpose of sending out a collector to search for seeds of Conifers, as well as other hardy trees; and I have been informed that they sent one out some time ago, and have just now received their first consignment of seeds from Oregon, which consist principally of *Pinus nobilis*, *P. monticola*, *P. Pattoniana*, and *P. Ponderosa*, besides several that are thought to be new. As public attention has been directed to our national forests, why does not the government send out collectors to gather seeds of good and rare hardy timber trees? If honestly done, the public would never grudge the expense, though the proceeds of this outlay would be for the benefit of the coming generations.—*Cottage Gardener*.

Address of Wm. S. King, Esq., before the New Hampshire Agricultural Society.

I HAVE received the above most capital address, and would be glad if I could lay it before the eyes of all my readers. Mr.

King is the editor of the *Journal of Agriculture*, a most able monthly, published at Boston.

The lecture is a gallant attack upon the prejudices of classes, and particularly those of farmers, against what is known as book-farming, and the introduction of science into the management of the barnyard and field. He shows, in a masterly manner, that to be a practical farmer it is not necessarily the case that a man should be a mere drudge,—an ox, an ass, and beast of burden—but one who brings with him the light of science; one who seeks and knows the causes of things; one who goes to the earth and asks her what part she plays in the production of vegetation; one who inquires of the passing breeze what magic in the kiss left in the nodding leaf, and of the gleaming light its kindly influences.

Of the commonly received idea of a practical farmer, and of the model which the author would hold up for our imitation, we will allow the author to speak for himself, in his own most forcible and most illustrative language:

To decide whether a stranger, who calls himself a farmer, has a right to the title, is not your first glance cast upon his clothes, to see if they be farmer-like; and your next upon his hands, to find if they are hardened by manual labor. If a man, in a black broadcloth dress coat, having hands fair to look upon, and uncalled upon by contact with the plow-handle, presents himself to your notice, as a practical farmer, your politeness may or may not prevent you from laughing in his face, at the obvious absurdity of the claim; but you laugh none the less, in your sleeves, as you set him down for a *fancy-farmer*.

Now, sirs, what right have you to deride this man's pretensions; and, off-handed, to pronounce that he is not a farmer, as accomplished as yourself, or even able to teach you what you have not yet learned, in your own occupation? It is because you consider that a practical farmer, is he, *and he only*, who labors with his hands; this would make

them tough ; and the necessities of his occupation would compel him to wear more homely apparel. Is it true, that this it is, and this alone,—*labor with the hands*,—*HARD WORK*,—that makes the practical man ? Then is your hired help, who follows the plow, day in and day out ; who shivers in the wintry stable, and sweats at the harvest, many an hour when you are occupied about other affairs, a better practical farmer than you ; for he often works more. Then is the ox, that he drives, the most practical, for he wears rougher and tougher garments, has harder hands, and does more hard work, than either of you.

Farmers ! you greatly mistake the meaning of the word *practical*. Stand with me upon the quarter-deck of a ship, as she strips for a battle with the storm. The bullying winds roar. The threatening sky descends and contracts. The angry waves lift up their heads. The tempest-tost bark, now piercing the sky with her trembling masts, now driving headlong into the yawning trough of the sea, is freighted with human souls. Do they not now, if ever, need the services of a *practical* sailor to conduct them safely through the envioning perils ? Who then is he, to whom all eyes instinctively turn, as under God, their only hope ? Is it that stalwart son of the sea, whose strength is the boast of the ship's company ;—who can “swim farther, dive deeper, and come up drier, than any man in the crowd ;” —who can “hand, and reef, and steer ;” —who can mount the rigging, with a squirrel's agility, and tie all the fast-knots, and sliding knots, that are the sailor's pride ; and splice, or “lay a cable, with the next man ;” —is this he, who is selected as the best practical sailor, to command the craft, in her hour of danger ? Far from it, friends. The practical man, for the occasion, is yon dapper little fellow, with soft, white palms ; sporting, mayhap, a seal ring ; and dressed, as if inclined to give to tar and pitch, and all other defiling substances, a wide berth. He it is,—this man, who has been *educated for his position*, and who directs the labors of others,—he it is, who is the practical sailor.

If, then, in the hour of danger, when death rages for his prey, and the yawning sea shows the ready grave, men acknowledge the might of mind ; why is it, that far-

mers will persist in undervaluing it ; and will set up sinews before it ?

The mists of prejudice will surely roll up the vaileys and afar over the hills of the old Granite State, if many such lectures are written and delivered within her borders. If many such intelligent journalists write and print untiringly in the right direction ;—if “practical farmers” cast aside the prejudices of early education ;—if they no longer rest satisfied with false modes, though taught by them of ancient days,—but by laboriously observing the path which Nature herself points out,—her wants and her necessities—within but a few, a very few years, it will be unnecessary for a lecturer to ask the following questions :

How many farms, gentlemen, within the reach of your observation, are, by this definition, scientifically cultivated ? On how many is the depth of the plowing gauged by the depth of the soil, the character of the subsoil, and a wise intention to render the fertile loam deeper year after year, inch by inch ? How many farmers of your acquaintance, who enter on a farm with a soil three inches deep, undertake, as they well and easily might, to render it in ten years twelve inches deep ? I would tell you here, that the experiments of thousands of farmers have proved, that by thrusting the point of your plow one inch, or three-quarters of an inch deeper at each plowing, and bringing to the surface so much of the inert subsoil, to be operated on by the atmosphere, and to be benefitted by the manure year after year, you will to this extent increase your active fertile soil, and gradually create another farm, as it were, under your old one. But this would be scientific farming ; and, consequently, in the opinion of too many farmers, mere nonsense ; notwithstanding that facts, plenty as blackberries, confront them with evidence.

On how many farms in this State, or in any State, is the manure applied with sufficient knowledge of the component parts and consequently of the wants, of the soil ? On how many is the manure itself prepared and preserved, so that it retains all of its valuable constituents ? Why, gentlemen, if one

were to say that plants, to thrive, require food in certain proportions; and that if one of the necessary substances is not present in the soil, and is not supplied in the manure, the plant can not thrive; and that in proportion as you have or apply the precise quantity of each ingredient necessary, so nearly do you come to getting the maximum crop,—you would set it down at once, in scorn, as scientific farming! And yet how else do you account for the fact, that one man grows a hundred bushels of corn to an acre and another but twenty? Why, clearly, because the land whereon grew the hundred bushels was naturally, or by scientific treatment, in a proper condition for corn-bearing,—had in its womb all the necessary kinds, and enough of each kind of food, that the young and the growing plant required for its leaves, its stalk, its tassel, and its ear. And how do you account for the fact, that you do not get an equal crop on the same ground the next year? Why, because the first crop has eaten up a good share of the food in the ground-pantry; and the third season, (if any man is silly enough to try corn again on the same ground, without having supplied food by manure,) the third crop would find the shelves pretty well cleaned; and the progeny of that year would be pigmies.

On how many farms in New Hampshire is an accurate calculation made of the cost of growing different crops, so as to decide which is the most profitable to raise? On how many farms is an account kept of out-lay and income from each field and each animal, that the prudent husbandman may know where is the mouse-hole in his meal-bin? This is not done because it would be scientific farming. To be sure, a merchant who pretended to carry on an extensive business without keeping books, and without taking now and then "an account of stock;" or who continued to deal in certain styles of goods without knowing whether he was making or losing money by the operation, would be held insane. But surely that is no reason why a man, who prides himself on being a plain, practical farmer, should farm by arithmetic.

Do farmers hereabouts, or farmers generally anywhere, attempt gradually to improve their seed by early and judicious selections; and by always planting the best,

instead of reserving the worst for that purpose; or do they sell all that is fit to be sold, and keep the poorest for home use and for seed? This gradual improvement of seed, such as Mr. Brown, on an island in Lake Winnepesaukee has made in corn—known as Brown corn—and as many others have made in many plants, and fruits, and flowers, by the simple selection of seed, with judicious cultivation,—this smacks rather too much of Science, for a practical farmer.

#### Use of Lime.

MUCH has been written upon the use of lime in agriculture, and yet this subject does not seem to be fully understood; some persons need "line upon line," just as some soils need lime upon lime.

Lime is an element in all organic structures. The earthy portion of the bones in the higher classes of animals consist mostly of lime combined with phosphoric acid. The shells of the lower classes consist of lime combined with carbonic acid. All parts of the animal structure are derived from vegetables. Vegetables then must contain a considerable amount of lime, and as lime is not a constituent of the atmosphere, it must be contained in the soil.

According to Johnson's table, one bushel of wheat contains six and two-fifth ounces of lime; a bushel of barley, six and one-ninth ounces; oats, two and three-fifths; a ton of turnips a little more than six pounds; a ton of potatoes twenty-eight pounds; and a ton of clover hay, sixty-three pounds. These quantities vary considerably. This is especially true of wheat. When the soil is plentifully furnished with lime, wheat contains a larger per centage. The skin of the grain is said to be thinner, and the flour whiter, and finer, and more glutinous.

In soils that consist largely of clay, the benefit of lime is most obvious. It loosens the texture of the soil and renders it less adhesive. It combines with acids, and thus sets at liberty other alkalies that may be contained in it. It is beneficial to soils containing large quantities of vegetable matter, as it appears to render such matters more soluble and more useful to the living vegetation. Almost every crop that is cultivated is improved by it. It is said to be injurious to flax and hemp, rendering their fibre thin-

ner and more brittle. Compounds formed in the soil by lime are comparatively insoluble. Hence it is from three to six years before lime applied to the soil is exhausted. The hydrate of lime, or lime slacked with water, acts the most rapidly. Carbonate of lime produces the most permanent effect upon the soil. Light, dry, sandy soils containing little vegetable matter, are not those which are most benefitted by lime; such soils already contain an abundant supply.

There is one error with respect to the use of lime, which should by all means be avoided; that is, the mixture of lime with the manure heap, whether in a fermenting or quiescent state. Ammonia abounds in animal manures, combined with phosphoric, carbonic, muriatic, or other acids. These salts of ammonia are decomposed by lime, which combine with their acids and expels the ammonia, an element which is of great importance to vegetation. Probably the best methods of applying lime are to spread it upon the soil before planting, and mix it in with the harrow, or to sow it as a top dressing, soon after the coming up of the crop.

Vegetables that contain in a perfect state a large amount of lime, may attain their full size without an adequate supply, but they will not be perfect plants. Lime is an important ingredient in clover; it is found chiefly in its cuticle or covering membrane. If this grass is grown upon a soil consisting mostly of vegetable matter, and under the stimulus of animal manure, it will lodge or break down from its own weight, for want of the strength or stiffness which a due proportion of lime would impart to it. Potatoes contain a large percentage of lime, and there can be no doubt that for some years past those that have been raised under circumstances that preclude a sufficient supply of lime have been more liable to disease than those that could obtain an abundant supply of it.

Potatoes that have grown in low land where the soil consists largely of decayed vegetable matter, or which have been raised by animal manures, have been affected by the rot much more than those which have been raised on sandy soils, or by means of plaster, which is sulphate of lime.

Vegetables that are perfect in their organization, that is, that contain all their

normal elements in due proportion, will better resist disease when exposed to its causes, than those that are deficient in any one element; indeed, this remark may be made more general—it may be applied to all living organized beings. The more perfect they are in structure, and the more normal in growth and proportion, the more perfect will be their health and the greater their power to resist disease. I hope not to be misunderstood. I would by no means intimate that the absence of lime has anything to do with the origin of the potato disease. I do not know that diseased potatoes have been subjected to chemical analysis, to ascertain whether they are deficient in this element, or that those varieties that are most liable to disease have been compared analytically with those that are less so. The solution of these questions merits the attention of the agricultural chemists, if it has not already received it. But I have no doubt that the dry, mealy potato contains more lime than the wet, soggy one—or that those that have grown on dry land, with an abundant supply of lime, have rotted less than those that have grown under other circumstances.

The analysis of soils and the analysis of plants require to be carried on together.

The cultivator needs to know the composition of the plants which he proposes to cultivate, and the composition of the soil in which he proposes to cultivate them, that he may judge of the adaptiveness of the one to the other, and be able to modify the soil to suit the demands of the plant. J. R.

—N. E. Farmer.

#### Hemlock—*Abies Canadensis*.

Among evergreen trees there are none more beautiful than the common hemlock, and it is only that it is common, and found in almost all sections of the country that has prevented its becoming prized as it deserves. It is perfectly hardy, and grows in the forest to the height of sixty or eighty feet, but when standing alone forms a broad, low head, with irregular branches, clothed with delicate green foliage of singular beauty. Its appearance is much improved in favorable situations, and it may be grown successfully on almost all soils with proper treatment. We have observed in the woods beautiful shrubs of the hemlock, which

would prove as ornamental for yards and lawns as any of the most highly prized foreign varieties.

The hemlock is peculiarly beautiful "in the beginning of summer, when each twig is terminated with a tuft of yellowish green recent leaves, surrounding the darken green of the former year." Mr. Emerson, in his report on trees and shrubs of Massachusetts, remarks in substance, that it possesses a lightness and gracefulness—especially when the dark green mass is moved by the gentle breeze—that can not fail to attract the attention of the most careless observer of the beautiful in nature; it is entirely free from that stiffness, and grenadier-like appearance which some other trees of the same family exhibit. It is a happy, joyous tree; like the polite and vivacious Frenchman, it continually bows and smiles, alike in sunshine or storm, winter or summer. When set on a lawn, singly or in groups, it forms a dense mass, and produces a deep shade; perhaps it is best when planted in this way. He adds:

"As it bears pruning to almost any degree, without suffering injury, it is well suited to form screens for the protection of more tender trees and plants, or for concealing disagreeable objects. By being planted in double or triple rows it may in a few years be made to assume the appearance of an impenetrable wall—really impenetrable to the wind, and to domestic animals. A hedge of this kind, seven or eight feet high, on a bleak, barren plain, exposed to the north-west winds, gave Dr. Greene, of Mansfield, a warm, sunny, sheltered spot, for the cultivation of delicate annual plants. When I saw it, the annuals, several of which were rare exotics, were beautiful, the hemlock screen was much more so."

A writer in the *New England Farmer*, who thinks the hemlock "the most beautiful of all evergreens, and strangely neglected, while we search distant climes to procure those of less value and beauty," has tried transplanting the hemlock with good success. He says:

"I have spoken of some of its advantages, and now methinks I hear some one say it is difficult to transplant, and that it grows slow while young. The latter objection is real, to some extent; it does not grow very fast—I mean small plants—for the first year or

two; after that, if the land is good, it makes very good growth, though it grows even when young, as well, or better than many other things with which we take much pains, which are inferior to this. The former objection I shall answer by adding my own experience in transplanting the tree. In the spring of 1849, I pulled up about two hundred small trees, in height from a foot and a half, to three feet, out of the moss of a swamp, having nothing on the roots; set them out immediately in a moist place; three-fourths lived and did well. The next year I tried the same experiment on a larger scale, got about five hundred, pulled them up in the same way, set them out as I did the others—four-fifths lived and did well. These trees have now a great many fibrous roots, and can be moved without loss. Last spring I tried larger trees from a different soil, a loam somewhat gravelly, moved about twenty-five, of sizes from three to eight feet in height, chose a moist day, took them up with a ball of earth, and set them out as soon as possible; when taking them up I was careful not to disturb the roots in the ball of earth. Every one lived, though last summer with us was the driest we have had for many years."—*Rural New York*.

#### Statistics of Ohio Agriculture.

It is a very difficult thing to determine the precise proportion in which land in any given State is used. Yet, this is an all-important fact, in determining the productiveness of land, and the condition of a people. In Ohio, however, we can do this with tolerable accuracy; for both State and National Governments have ascertained different parts of the problem, to which the annual reports of the State Board of Agriculture have added much information. The following are elements gathered from these sources, and the conclusions to which they lead:

Acres of land returned for Taxation, .....	24,149,369
Acres of land returned in the census as improved, .....	9,851,493
Acres unimproved, .....	14,297,876
Acres cultivated in 1850—in Wheat, .....	1,823,916
Acres cultivated in 1850—in Corn, .....	1,730,220
Acres cultivated in Corn and Wheat, .....	3,554,136
Cultivated in Oats, Rye, etc., .....	1,000,000
Leaving for Grass, Meadow, Fallow, etc.,	5,297,357



It thus appears, that the entire land of the State is thus used, viz :

Cultivated in Grain, .....	19 per cent.
in Grass, Meadow, etc., .....	21 " "
in woods and waste, .....	60 " "

If we allow twenty per cent. for woods and fallow ground, the grain and meadow land of the State may be doubled, with nothing but common cultivation. But, if we allow for the increase of skill and labor, which always results from the increase of population, then fifty per cent. more should be added to the total production. As the people, now in this State, have a *surplus* of one half their whole production, it follows, that Ohio *can support ten millions of people*, without feeling the burden of excessive population.

The aggregate corps, animals, etc., produced and sustained on nine millions of acres as above distributed, were as follows : for the year 1851, as returned to the Auditor :

Wheat, (adding fifteen counties not returned,) bushels, .....	35,000,000
Corn, bushels, .....	62,000,000
Oats, (from the Census,) bushels, .....	13,472,742
Rye, bushels, .....	425,718
Barley, bushels, .....	254,358
Peas and Beans, bushels, .....	60,168
Irish Potatoes, bushels, .....	5,057,769
Sweet Potatoes, bushels, .....	187,991
Buckwheat, bushels, .....	638,064
Hay, tons, .....	1,443,142
Clover Seed, bushels, .....	103,196
Grass Seed, bushels, .....	37,310
Flax Seed, bushels, .....	188,188
Maple Sugar, pounds, .....	4,588,209
Beeswax and Honey, pounds, .....	804,275
Molasses, gallons, .....	197,398
Cattle, .....	1,358,947
Sheep, .....	3,942,928
Swine, .....	1,964,770
Horses, .....	463,397

In the above catalogue of articles, Ohio is the first State in the Union, in wheat, corn, flax seed, maple molasses, horses, and sheep ; proving the State to be the first in the Union in purely agricultural products. In wheat the census crop fell, in consequence of a failure of the crop, a little below Pennsylvania ; but, as the ordinary crop before and since, was nearly double that of Pennsylvania, it does not change the fact, that Ohio is decidedly first in wheat, as well as corn.—*Railroad Record*.

#### Transmutation.

"A very singular discovery has lately been made in France by M. Fabre, a gardener of Ayde. The herb *Ægilops*, heretofore con-

sidered as worse than useless, grows abundantly on the shores of the Mediterranean. It produces a species of grain resembling wheat in form, but much smaller. In the year 1839 M. Fabre sowed a quantity of this grain, and he found the produce bore a close affinity to wheat ; that produce he sowed the next year, and the yield was still more like wheat. He went on sowing the produce of each year the succeeding year, until he has now succeeded in getting as fine a crop of wheat, and of as good quality as can be wished for. Thus he has proved that a wild and mischievous weed can be educated into excellent wheat."

This subject has been paraded in the papers at different times for some months, and the high authorities which have countenanced the theory have given it so much weight that many persons have adopted the belief that one species may change into another. Schleiden, the eminent botanist, has some views which appears to correspond with this. I had intended to prepare an article upon the *permanence of species*, but have not been able to accomplish it ; in the meantime, will remind the reader that, although the origin of wheat and some others of our cultivated plants is involved in much obscurity, and although in their present condition they may exist merely as *varieties*, more or less permanent, still it will not do to talk about the changeability of *species*, or their convertibility into one another, while we retain the present signification of the terms. Admitting the statement, the question should be, are the *Ægilops* and the wheat mere varieties of a given *species*, and not whether one species has changed into another. I have sometimes apprehended that botanists, in their zeal for extending their catalogues, have not sufficiently weighed the value of their specific characters, and that thus mere varieties have been dignified with specific names and grade. Indeed, it is not always easy to ascertain the true distinguishing characters of species without an extended investigation.



## The Garden.

### A DISCOURSE ON FLOWERS.

HAPPY is the man that loves flowers! Happy even if it be adulterated with vanity and strife. For human passions nestle in flowers too. Some have their zeal chiefly in horticultural competitions, or in the ambitions of floral shows; others love them as curiosities, and search for novelties, for "sports," and monstrosities. We have been led through costly collections by men whose chief pleasure seemed to be in the effect which their treasures produced on others, not on themselves. But there is a choice in vanities and ostentations. A contest of roses is better than of horses. We had rather take a premium for the best tulip, dahlia, or ranunculus, than for the best shot. Of all fools, a floral fool deserves the eminence.

But these aside, blessed be the man that really loves flowers! loves them for their own sakes, for their beauty, their associations, the joy they have given and always will give; so that, if there was not another creature on earth to admire or praise, he would just as much sit down among them as friends and companions. But such men need no blessing of mine. They are blessed of God! Did He not make the world for such men? Are they not clearly the owners of the world, and the richest of all men?

The end of art is to inoculate man with the love of nature. But those who have it in the natural way need no pictures nor galleries. Spring is their designer, and the whole year their artist.

He who only does not appreciate floral beauty is to be pitied like any other man who is born imperfect. But men who contemptuously reject flowers as effeminate and unworthy of manhood, reveal their coarseness. Were flowers fit to eat or drink, were they stimulative of passions, or could they

be gambled with like stocks and public sciences, they would take them up just where finer minds would drop them; who love them as revelations of God's sense of beauty; as addressed to the taste, and to something finer and deeper than taste, that power within us which spiritualizes matter, and communes with God through His work.

Many persons lose much of the enjoyment by indulging false association. The term *weed* ends the glory of some flowers. But all flowers are weeds; and somewhere our rarest flowers are somebody's commonest. Flowers growing in noisome places, in desolate corners, upon rubbish, or rank desolation, become disagreeable. Road-side flowers, ineradicable, and hardy beyond all discouragement, lose themselves from our sense of delicacy and protection. And generally there is a disposition to undervalue common flowers. If a plant be uncouth, it has no attractions to us simply because it has been brought from the ends of the earth and is a "great rarity;" and if it has beauty, it is none the less, but a great deal more attractive to us because it is common. It adds generosity to beauty. It gives joy to the poor, the rude, and to the multitudes who could have none were Nature to charge a price for her blossoms. Is a cloud less beautiful, or a sea, or a mountain prospect, because often seen, or seen by millions?

At any rate, while we lose no fondness for eminent and accomplished flowers, we are conscious of a growing respect for the democratic crowds. There is, for instance, the mullein, of but little beauty in each floweret, but a brave plant, growing cheerfully and heartily out of abandoned soils, ruffling its root with broad-palmed, generous, velvet leaves, and erecting therefrom a

spire that always inclines us to stop for a kindly look. This fine plant is left, like a decayed old gentleman with us, to a good-natured pity. But in other countries it is a flower, and called the "American velvet plant."

We confess to a homely enthusiasm for clover—not the white clover, beloved of honey bees, but the red clover. It holds up its round, honest head with such rustic innocence! Do you ever see it without thinking of a sound, sensible, country lass, sun-browned and fearless as innocence always should be? We go past a field of red clover like Solomon in a garden of spices. There is the burdock, too, with its prickly rosettes, that has little beauty or value, except (like some kind, brown, good-natured nurses) as an amusement to children, who manufacture baskets and what not of its burrs. But this thistle is a prince. Let any man that has an eye for beauty take a view of the whole plant, and see where is more expressive grace and symmetry [say rather character]; and where is there a more kingly flower? To be sure there are sharp objections to it in a bouquet; yet most gardeners feel toward a thistle as boys toward a snake; and farmers, with more reason, dread it like a plague. But it is just as beautiful as if it were a universal favorite. What shall we say of mayweed, irreverently called dog-fennel by some? Its acrid juice, its heavy pungent odor, make it disagreeable—and being disagreeable, its enormous anti-Malthusian increase renders it hateful to damsels of white stockings, compelled to walk through it on dewy mornings. Arise, O scythe, and devour it!

The first thing that defies the frost in spring is the chickweed. It will open its floral eye and look the thermometer in the face at 32°; it leads out the snow-drop and crocus. As a harbinger and herald, let it not be forgotten. [It even welcomes the anniversary of the birth of Washington, in this latitude.]

You can not forget, if you would, those golden kisses all over the cheeks of the meadow, queerly called dandelions. There are many green-house blossoms less pleasing to us than these. Moreover, their passing away is more spiritual than their bloom. Nothing can be more airy and beautiful than the transparent seed-globe—a fairy dome of splendid architecture.

As for marygold's, poppies, hollyhocks, we shall never have a garden without them, both for their own sake, and for the sake of old-fashioned folks, who used to love them. Morning-glories need no praising. The vine, the leaf, the exquisite vase-formed flower, the delicate and various colors, will secure it from neglect while taste remains. Grape-blossoms and mignonette do not appeal to the eye, and if they were selfish no man would care for them. Yet, because they pour their life out in fragrance, they are always loved, and, like homely people with noble hearts, they come to look beautiful by association. Nothing that produces constant pleasure in us can fail to seem beautiful. We do not need to speak for that universal favorite, the rose! As a flower is the finest stroke of creation, so the rose is the happiest hit among flowers!

But we must not neglect the blossoms of fruit-trees. What a great heart an apple-tree must have! What a generous work it makes of blossoming! Not a single bloom for each apple that is to be, but a profusion, a prodigality of them. The tree is but a huge bouquet; it gives you twenty times as much as there is need for, and evidently because it loves to blossom. We will praise this virtuous tree. Not beautiful in form, often clumpy, cragged, and rude; but glorious in beauty when efflorescent. Nor is it a beauty only at a distance. Pluck down a twig and examine as closely as you will; it will bear the nearest looking. The simplicity and purity of the white expanded flower, the half-open buds slightly blushed, the little pink-tipped buds unopen, crowding up like rosy children around an elder brother or sister! Why, here is a cluster more beautiful than any you can make up artificially, and you may pick from the whole garden. Wear this family of buds for my sake; it is all the better for being common. I love a flower that all may have; that belongs to the whole, and not to a select and exclusive few. Common, forsooth! a flower can not be worn out by much looking at, as a road is by much travel.

How one exhales, and feels his childhood coming back to him, when, emerging from the hard and hateful city streets, he sees orchards and gardens in sheeted bloom, plum, cherry, pear, peach and apple, waves and billows of blossoms rolling over hills

and down through the levels. My heart runs riot. This is a kingdom of glory. The bees know it. The very flies, that never seem to be thinking of anything, are rather sober and solemn here. Such a sight is equal to a sunset; a sunset is but a blossoming of the clouds.

We love to fancy that a flower is the point of transition at which a material thing touches the immaterial; it is the sentient, vegetable soul. We ascribe dispositions to it; we treat it as we would an innocent child. A stem or root has no suggestion of life. A leaf advances toward it; and some leaves are as fine as flowers, and have a grace of motion seldom had by flowers. But flowers seem to smile; some have a sad expression; some are pensive and diffident; others again plain, honest, and upright, like the broadfaced sunflower and the hollyhock. We speak of them as laughing, as gay and coquettish, as nodding and dancing. But no man of sensibility ever spoke of a flower as he would of a fungus, a pebble or a sponge. They are more lifelike than many animals. We commune with flowers; we go to them if we are sad or glad; but a toad, a worm, an insect, we repel as if real life was not half so real as imaginary life. What a pity they can utter no sound! A singing rose, a whispering violet, a murmuring honeysuckle! Oh, what a rare and exquisite miracle would these be! When we hear melodious sounds—the wind among trees; the noise of a brook falling down deep into a leaf-cover'd cavity; birds' notes, especially at night; children's voices as you ride into a village at dusk, far from your home, and long absent, and quite home-sick; or a flute heard from out of a wood, a silver sound rising up among silver-lit leaves, into the moonlighted air; or the low conversation of persons whom you love, that sit at the fire in the room where you are convalescent; when we think of these things, we are apt to imagine nothing perfect that has not the gift of sound. But you change your mind when you dwell lovingly among flowers; they are always silent. Sound is never associated with them. They speak to you, but it is as the eye speaks, by vibrations of light and not of air.

It is with flowers as with friends. Many may be loved, but few much beloved. Wild honeysuckles in the wood, laurel bushes in

the very regality of bloom, are very beautiful to you. But they are color and form only. They seem strangers to you. You have no memories reposed in them. They bring back nothing from time. They point to nothing to come. But a wild-brier starts a deeper feeling. It is the country cousin of the rose, and that has been your pet. You have nursed it, and defended it; you have had it for companionship as you wrote; it has stood by your pillow while sick; it has brought remembrance to you, and conveyed your kindest feelings to others; you remember it as a mother's favorite; it speaks to you of your own childhood—that white rose-bush that snowed in the corner by the door, or that generous bush that blushed red in the garden with a thousand flowers, whose gorgeousness was among the first things that drew your childish eye, and which always comes up before you when you speak of childhood. You remember, too, that your mother loved them. As you walked to church she plucked off a bud and gave you, which you carried, because you were proud to do as she did; and you remember how, in the listening hour of sermon, her roses fell neglected on her lap; and how you slyly drew one and another of them; and how, when she came to, she looked for them under her handkerchief, and on the floor, and then, spying the ill-repressed glee of your face, smiled such a look of love upon you as made a rose forever after seem to you as if it smiled a mother's smile. And so a dog-rose, or the prairie-rose, or the sweet-brier, that at evening fills the air with odor, (a floral nightingale whose song is perfume,) greet you as dear and intimate friends. You almost wish to get out, as you travel, and inquire after their health, and ask if they would send any messages to their town friends.

But no flower can be so strange, or so new, that a friendliness does not spring up at once between you. You gather them up along your rambles; and sit down to make their acquaintance on some shaded bank with your feet over the brook, where your shoes feed their vanity as in a mirror. You sort them; you question their graces; you enjoy their odor; you range them on the grass in a row and look from one to another; you gather them up, and study a fit gradation of colors, and search for new specimens

to fill the degrees between two violent extremes. All the while—and it is a long while if the day be gracious and leisure is ample—you are having various suggestions and analogies of life darting in and out of your mind. This flower is just like such a friend; that one makes you think of mignonette, and mignonette always makes you think of such a garden and mansion, where it enacted a memorable part; and *that* flower conveys some strange and unexpected resemblance to certain events of society; and so your pleased attention strays through a thousand vagaries of fancy, or memory, or vaticinating hope.

Yet these are not home flowers. You did not plant them. You have not screened them. You have not watched their growth, plucked away voracious worms or nibbling bugs, and seen them in the same places year after year, children of your care and love. Around such there is an artificial life, an associational beauty, a fragrance and grace of the affections, that no wild flowers can have.

It is a matter of often gratitude that this finest gift of Providence was the most profusely given. Flowers can not be monopolized. The poor can have them as much as the rich. It does not require such an education to love and appreciate them, as it would to admire a picture of Turner's or a statue of Thorwaldsen's. And as they are messengers of affection, tokens of remembrance, and presents of beauty, of universal acceptance, it is pleasant to think that in them all men recognize a brief brotherhood. It is not impertinent to offer flowers to a stranger. The poorest child can proffer them to the richest.

A hundred persons turned together into a meadow of flowers, would be drawn together in a transient brotherhood. It is often affecting to see how serviceable are flowers to the necessities of the poor. If they bring their little floral gift to you, it can not but teach you to think that their grateful affection longed to express itself as much as yours. You have books, or gems, or services, that you can render as you will. The poor can give but little, and do but little; they seem shut out from those exquisite pleasures which spring from sincere gifts, were it not for flowers! I never take one from a child, or from the poor, that I

do not thank God in their behalf for flowers! And then, when Death enters a poor man's house! It may be, the child was the only creature that loved the unbefriended father—*really* loved him; loved him utterly; or it may be it is an only son, and his mother a widow, who in all his sickness felt the limitation of poverty, and did what she could, but not what she would had there been wealth. The coffin is pine. The undertaker sold it with a jerk of indifference and haste, lest he should lose the selling of a rosewood coffin, trimmed with splendid silver screws. The room is small. The attendant neighbors are few. The shroud is coarse. Oh! the darling child was fit for whatever was most excellent, and the heart aches to do for him whatever could be done to speak love. But it takes money for fine linen; money for costly sepulchre. But flowers, thank God, the poorest may have. So, put white buds in the hair; and honey-dew, and mignonette, and half-blown roses, on the breast; if it be in the spring, a few white violets will do; and there is not a month till November that will not give you something. But if it is winter, and you have no single pot of roses, then I fear your darling must be buried without a flower; for flowers cost money in the winter.

And then, if you can not give a stone to mark his burial-place, a rose may stand there; and from it you may, every spring, pluck a bud for your bosom, as the child was broken off from you. And if it brings tears for the past, you will not see the flowers fade and come again, and fade and come again, year by year, and not learn a lesson of resurrection—when that which perished here shall revive again, never again to droop or die.—*Independent*.

#### Covent Garden Bouquets.

We promised, a long time ago, we are ashamed to say how long, to give an account of how bouquets are made up in Covent Garden; but so many other matters pressing on us at once, we have never been able to give attention to the subject till now. All who have visited, or are acquainted with, London, must have observed the exceeding beauty and taste with which these bouquets are arranged, and the art which must be employed in forming them; and

it has been an object of curiosity to many how such an arrangement is obtained. Until we set all our faculties of observation to work, we were equally as ignorant of the subject as any of our readers at the Land's End could be, but, after a little perseverance, we at last arrived at it. The process is as follows: Procure a quantity of the finest copper wire, such wire as is used in the artificial flowers which decorate the interior of ladies bonnets. It is with this that all the bouquets are tied; there is no string or matting made use of. Let a portion of this wire be kept in a coil, for tying, but let a portion of it, also, be cut into lengths of about six inches. Having decided what the device of the bouquet is to be, and the flowers of which it is to be composed, let one of these flowers form a center-piece, or "foundation," as the ladies say, when they begin knitting a purse. This center-piece forms, as it were, the center of the circle, and all the other flowers are to be arranged in concentric circles round it. One end of the coil of wire is fixed to the stalk of the center flower, and every single flower which is added is secured by a twist of the wire, much in the way we have seen boys tying a whip on the end of a stick. These bouquets are not formed of large bunches of flowers, such as a great truss of a Scarlet Geranium, or a spike of a Hyacinth, but single flowers, or florets, or bells, only are used. To supply the want of a long stalk, in such cases, to bind them by, the sixth-inch lengths of wire are twisted round the short stalks of the florets or bells, and these serve in place of stalks. Camellias, also, are furnished with these artificial stalks, when the natural one is too short; and when the bouquet is completed, the stalks of the flowers are, in fact, a bundle of wires. It is thus that so much device is obtained, which could not be had by using large bunches or trusses of any particular flowers.—*Cottage Gardener*.

#### Sowing Seeds.

FILL the seed-pots half way up, at least, with drainage; then with soil, within half an inch of the rim—the finest next the surface; press it down firmish, not too much; then thoroughly water them, or soak them by setting them in a tub of water. Let

them drain thoroughly in an open place, until the surface begins to get a little dry; then press it level, gently, with the bottom of a flower-pot, or, better still, with a round piece of wood, say three to five inches in diameter, with a large nail or pin fixed to its center to hold by. Spread the seeds evenly on this surface, and then cover with fine light sandy soil, no deeper than the thickness of the seed; so that for small dusty seed the slightest dusting of sand will be necessary, or nothing but another gentle pressing.

The young plants will not want light until they are up; and the moisture already in the soil will be sufficient to vegetate all quick-growing ones, if prevented evaporating. To effect this object, there is no better or simpler plan than covering the mouth of the pot with inverted saucers or flats of a similar or larger size. Enough of air will thus penetrate to insure germination, but not enough to dry up the moisture. When, however, the soil does get too dry, it must be watered, or soaked again afresh; and, in delicate cases, it will be safest to set the pots in water, as high as within an inch of the seeds, and allow it to remain until all below is thoroughly soaked. In common cases, a sprinkling on the surface will be sufficient.

Remove the saucer whenever the seeds appear; but, in small, delicate varieties, it will be advisable to place a square of glass over the mouth of the pot, and then, by degrees, elevating the glass on one side, before exposing the tender things to the full draught of air in the greenhouse. Rest assured, that an ounce of attention to these trifles will be more satisfactory than some bushels of unavailing regrets.—*Cottage Gardener*.

#### Lycopodiums.

*Culture of Lycopodiums in a Wardian Case.*—There are no plants, not even excepting Ferns, that thrive so well in a close glass case as Lycopods. After all that has been said and written about suitable plants for these drawing-room green houses, there are very few plants that will live any length of time in them. I may venture to claim some credit for knowledge on this point, for while at Pine-Apple Place I had to furnish

with plants great numbers of them, and my experience warrants me to assert, without fear of contradiction, that, excepting Ferns and Lycopodiums, no plants will exist satisfactorily more than six months, and great numbers that I tried did not live half that time.

The great cause of failure no doubt arose from the want of fresh air, and a too moist atmosphere. The plants, excepting the two tribes mentioned above, always become covered with mould, and, in consequence, perished.

To grow well, even Lycopods and Ferns, I would recommend the upper squares to be hinged, so that, when the air becomes foul, or too much heated, the squares can be opened, and the plants relieved. If one of the ends, also, is made to open, it will cause a freer circulation of air, and the plants will be the more benefited thereby.

Pure air being provided for the plants, the next important thing is soil. This should be of an open texture, to prevent stagnation of water, and to allow the air to reach the roots, for it is a well-proved fact that roots will perish if totally deprived of atmospheric influence. I always used very rough peat, generally such as would not pass through a quarter-inch meshed sieve. This I mix liberally with silver sand, but, where this cannot be had, river sand will answer the purpose. To this I added some chopped sphagnum, and mixed the whole well together by frequent turnings and mixings. It then presented an open, light appearance, and any one at all acquainted with Lycopods would have said that they were sure to thrive in it.

Wardian cases have, or should have, a box to rest upon, six or seven inches deep. This is generally made of zinc; very ornamental ones are cased with mahogany, and have four feet of the same material. I have seen one made in the gothic style, with pointed windows, or rather roof, and glazed with diamond-squared glass. It was intended to stand in the hall of a mansion, or rather castle, built in that style. It was a very noble case, and cost fifty guineas. Whether the plants grew well in it or no, I never learnt, but I think they could not fail, especially if planted with Ferns or Lycopodiums.

This box should have a thin layer of

drainage over the bottom. If that is not cased with wood, this drainage should be of some light material, or it would bulge it. I generally used pumice-stone, which is both porous and light, and the roots of the plants seemed to like it much, for they clung to it, and penetrated into the hollows abundantly. Upon this drainage place as much of the compost as will allow room for the balls of earth when the plants are turned out of their pots.

The glass covering should, in all cases, be moveable, in order that the planting may be properly and conveniently performed. Place the tall growers in the center, and the low ones on each side and ends, press the soil gently to each plant, and give a good watering; then allow them to stand without the cover for two or three hours, till the foliage is quite dry, and the surface of the soil partially so; replace the glass, and set the case in the place it is appointed for.

As these plants are mostly from warm climates, the case should stand in winter in a heated apartment. The heat need not exceed 50° or 55° during the night, nor more than 60° during the day. In summer they are sure to be warm enough, even without artificial heat. They require very little attention, and but seldom watering. Should they appear to grow fast and weak, give plenty of air, but as this will carry off the confined moisture, they will require a little more water, just sufficient to keep the soil moderately moist. Occasionally allow the surface to become dry, and then stir up the soil slightly between the plants, but be careful not to disturb the roots. Take this opportunity to pluck up all weeds that may appear, and to remove every appearance of mould, and every decayed leaf. Should any plant appear to grow too fast, so as to overshadow its neighbors, prune such into proper bounds; and should any die, replace them immediately.

By attending to these particulars in due time, the plants may be kept alive and healthy for at least twelve months. Wardian cases are most useful in large, smoky towns, and the plants will grow well in such a situation, because the glass shade protects them from the baneful influence of smoke. The following are a few additional species to the list already published in *The Cottage Gardener*.

*Lycopodium plumosum* (Feathery Lycopodium.)—A beautiful species, with the branches and foliage arranged flat, something like a feather.

*Lycopodium umbrosum* (Shade-loving Lycopodium.)—This species is also very handsome, the fronds rise up straight, and then spread out flat sideways; one frond spreading out one way, and another the contrary. It is well worthy of cultivation.

*Lycopodium Willdenovii* (Willdenow's Lycopodium.)—Very dark green, finely divided foliage. One of the handsomest of the whole genus. It is remarkable for not putting forth roots above the soil. It must be increased either by cuttings or division.—*Cottage Gardener.* T. APPEBY.

#### Subsoil Gardening.

"*Always do your best, and leave the rest.*"

SOME people are afraid to look below the surface soil, apparently regarding it as a sacred spot that must not be disturbed or intruded upon. Now the fact is, too many of us have long been looking at the surface of things, instead of penetrating into the subsoil below and examining its texture, to see if a mine of wealth be not there secreted.

The period has arrived when gardening must commence, and those whose garden plots are underlaid with a stiff, tenacious subsoil, would do well by considering whether some measure might not be taken with it that would render it more certainly productive. It has been demonstrated beyond cavil, that when a tenacious subsoil is dug and loosened up, without bringing it to the surface, or mixing it with the vegetable mould of the surface soil; if the season is very wet, the water descends into it readily, and the plants are protected from the injury of their food being too much diluted with water; and if a drought comes on, the roots penetrate deeper, and are benefited by the reservoir of moisture which lies below; and the capillary attraction in the earth brings the moisture upwards to the surface, and feeds and refreshes the vegetables. Any way you may fix it, it does much good, like all those good, honest old rules, that work well either end foremost.

The way to work it is to dig a little gutter, a spit deep, and the width of the spade, along the side of a bed, and throw the sur-

face earth which comes out of it to the other end of the bed which is to be dug, where it will be required for the purpose of filling the trench which will be left at the conclusion of the work. Then begin at one end of this gutter and dig it up, and turn it over in the bottom, from end to end; when this is done, begin and dig in the usual way, turning down the surface soil on to the subsoil which has just been dug; doing this from end to end properly, will leave another gutter, which dig and overturn as before; and so proceed till the bed is all dug two spits deep; the subsoil being topsyturvy, but none of it being brought up or mixed with the surface mould.

Trenching differs from this in turning the whole over, and bringing the subsoil to the surface; but that would be inexpedient when the vegetable mould was not at least two spits deep, unless the ground should be very heavily manured.

Now what is the objection to putting a garden through this salutary process? None at all, excepting that it will require twice the amount of labor; and this may appear to some a serious objection, but its adoption once in four or five years may be sufficient, unless the soil is very stiff and intractable; and it enables the gardener gradually every year, to extend his diggings a little deeper into the subsoil, and by bringing up to the surface a small portion of it annually, the surface soil is constantly gaining depth, which is a matter of prime importance in obtaining good crops with much greater certainty.

Should it be too serious an undertaking to overturn a whole garden in this way in one season, try a single bed this spring, and become convinced of the importance of doing everything you undertake in the way you are capable of; and then resolve never again to do anything *well enough*, which means, in common parlance, just as bad as will in any way answer the purpose for the time being. The foregoing plan has no novelty in it, for it has been often done, with the greatest advantage resulting from it. There is no untried theory about it that need scare the most timid; and the writer does not expect to gain anything further by the suggestion, than the pleasure of seeing many more good gardens, stocked with delicious, flourishing vegetables, than he has in times witnessed.



#### Origin of the Dahlia.

THE first naturalist who was sent to explore the hitherto unknown treasures of the New World, was Franciscus Hernandez, physician to Philip the Second of Spain, under whose patronage, and at a great cost, the mission was undertaken. In such a country, where no botanist had ever trodden, the success which attended his labors was of course very great. So extensive were his discoveries, and so new and varied were the forms of animal and vegetable existence which he described, the scientific men of that age regarded his statements with suspicion, and, in some instances, did not fail to express their incredulity in what they supposed to be the traveler's fabulous assertions. Notwithstanding, however, the opinions which at the time were current, it is now found that in every particular he was correct in what he had stated. Hernandez did not live to superintend the publication of his discoveries; but after his death they were collected into one large folio volume, profusely illustrated with woodcuts, and entitled, "*Rerum Medicarum Novæ Hispaniæ Thesaurus*." In this work the *Acocotli* is figured in three different forms, and described at considerable length. It is stated to be an herb bearing leaves similar to those of the Mountain Spikenard (*Valeriana tuberosa*, wild), which are divided into five leaflets, of which some are sinuated. The flower-stalks, which are nine inches long, are slender and smooth; and the flowers pale red and stellate. To this is added an account of its medicinal virtues, which we suspect are more imaginary than real. This, then, for one hundred and fifty years afterwards, was all that was known of this plant; those who believed the report of the traveler knew that such an one existed somewhere in the mountains of Quauhnhuac, but nothing more, for there it was allowed to remain.

It was not till 1789, when Vicentes Cervantes, director of the Botanic Garden at Mexico, forwarded seeds of this plant to the Royal Gardens at Madrid, that it had ever been seen in Europe. The plants produced from these seeds flowered in 1790. At that time the Royal Gardens were under the direction of Abbe Cavanilles, who, recognising in this new introduction a genus hitherto unknown in botanical science, applied to it

the name DAHLIA, in honor of M. André Dahl, a Swedish botanist. Among the plants produced in the Madrid Garden, Cavanilles discovered, as he thought, three distinct species, all of which he described and figured in his great work, "*Icones et Descriptiones Plantarum*, etc.," under the names of *Dahlia pinnata*, *rosea*, and *coccinea*, the former of which was a sort of semi-double, but the others proved only to be single flowers. Little progress seems to have been made in their cultivation, and it is doubtful whether any attempt had been made to multiply them from seed, for so long as ten years after their first introduction, we find Cavanilles distributing to various Botanic Gardens in Europe the identical three varieties he had first raised. It was not till 1802 that they were sent to the Jardins des Plantes, at Paris; and about the same time they were also forwarded to M. Decandolle, at Montpellier. The gardens of Berlin and Dresden seem to have had them some time before this, for so early as 1800 we have an account of *Dahlia rosea* being sent from Dresden to Berlin. About the period that Cavanilles sent his plants to the Jardin des Plantes, at Paris, the illustrious naturalists, Humboldt and Bonpland, in descending from the table land of Mexico towards the coast of the Pacific Ocean, found the Dahlia in a prairie between Aro and Patzcuaro, at a height of nearly five thousand feet above the level of the sea. The plants then discovered were transmitted to the Botanic Garden at Mexico, and in 1804 transferred to the Jardins des Plantes, and several other gardens throughout Europe, and among them was found the *D. coccinea* of Cavanilles. On its first reception, in 1802, in the Paris Garden, M. André Thouin, director of that establishment, judging from the climate of the country of which the Dahlia is a native, had it placed in a stove and treated as a tropical plant. In 1804 he published an elaborate treatise, illustrated with engravings, in the "*Annales du Museum d'Histoire Naturelle*," on its culture and management; but from all we can discover, it was many years after this before any progress was made in the production of good double flowers.

Till about this period, the generic name established by Cavanilles had been universally adopted by botanists throughout Eu-

rope; but Professor Wildenow, of Berlin, laboring under the impression that the name adopted by Cavanilles had been previously applied to another plant by Thunberg, he, in the fifth volume of his "*Species Plantarum*," discontinued the name of *Dahlia*, and substituted that of *Georgina*, which he founded in honor of Professor Georgi, of St. Petersburg.\* For some years this new nomenclature was pretty generally followed, particularly in Germany and central Europe; and even so recently as in some of the writings of Loudon, in our own country, it was preserved; but as it was clearly shown that the precedence must be given to Cavanilles, the name of *Dahlia* was again restored, and still continues, as in all probability it ever will, to be associated with this now justly popular and noble flower.

Several cultivators on the continent, observing the natural disposition of the *Dahlia* to sport from its original form, began now to direct their attention to raising new varieties, and treating it as a florist flower. Many attempts were made to procure double flowers, but without success. In 1806, the gardener at Malmaison forwarded to the gardener at St. Cloud, all the three varieties which were then known, namely, *coccinea*, *purpurea*, and *crocea*. These produced seeds, which were sown, but, notwithstanding all the attempts which were made year after year, they still remained single. In Belgium, however, they were more successful; for we learn that in 1812, M. Donckelaar, botanic gardener at Louvain, having sown a quantity of seed, raised plants which the first year produced all single flowers. Disappointed, but not discouraged, he from these saved a second quantity, which in their turn produced semi-double flowers; and, emboldened with the success which attended this second essay, he from the best of these semi-double flowers procured a further supply of seed, the produce of which, in the following year, presented him with three plants which bore flowers perfectly double. These were, therefore, the first really double flowers which were ever pro-

duced. After this there were many varieties raised of all shades and depths of color, and from this time the *Dahlia* began to attract for itself a measure of interest which has gone on increasing, and which even at the present day seems to be as great and unabating as if it were a plant of the most recent introduction, and which was still a novelty in the midst of us.

Hitherto we have been treating of the *Dahlia* as a plant confined exclusively to the continent; it must not, however, be inferred from this that it was not known and appreciated as soon, and as greatly, in our own country. The first account we have of its introduction to this country was by the Marchioness of Bute, in 1789, from Madrid, where the Marquis was then residing as ambassador from England at the court of Spain. It does not appear that the roots or seeds, whatever they were, had been duly tended or taken care of, for certain it is that it never became generally known, or was ever even partially distributed. In all probability it shared the fate of many hundreds of other plants which at that period were sent home by collectors and travelers to Kew Gardens. The space for the continual accessions which were taking place was far too limited, and the consequence was that a large number of the plants perished, either from neglect or too much crowding. The same liberal spirit which now exists in that establishment did not prevail in those days, by which new plants are disseminated throughout numerous large public and private establishments in the country; so that if the original plants in the Royal collection should be lost, a fresh supply can always be procured from those to whom they had been supplied. It was not so at the time of which we are writing, and the consequence was, when a plant which was unique died, it was entirely lost to the country. Such was the case with the *Dahlia*, for, besides the mere fact of its introduction, nothing more was known of it till 1804, when seeds were again forwarded from Madrid—on this occasion by Lady Holland. A plant of the *Dahlia coccinea* had, however, been in the country before this, because John Fraser, the celebrated traveler, who established a nursery in Chelsea, had flowered it in 1803. On the occasion of this second introduction, seeds were forwarded to M. Buonaiuti, who was at that time libe-

\*In a recent number of the "*Revue Horticole*," a correspondent goes a long way out of his road to indulge a spiteful ebullition against "*les Anglais*," because they have, as he says, taken the honor from the Swedish botanist by changing the name of *Dahlia* to *Georgina*, in honor of one of their Kings—George!

rism to Lord Holland, at Holland House, Kensington. This gentleman was successful in raising all the three varieties, and as they flowered they were illustrated in the leading botanic periodicals of that day. Great attention was paid to the cultivation of the Dahlia in this country, and with various degrees of success; but it is only within the last twenty years that it has been brought to that degree of perfection which now constitutes it one of the most attractive of our florist flowers.—*Hogg's History of the Dahlia.*

### Hollyhocks.

If we had not written upon this flower years ago, and had not been the first to recognise the improvements made by our friend Mr. Baron, who has been so grossly misrepresented in a recent vamped-up book, we might want an hour with the hollyhock: referring, however, to our former writings, and giving our old acquaintance, Mr. Parsons, the credit for the following hints, a few minutes will serve us. Mr. Parsons has been a most successful raiser and cultivator, and there is nothing like bookmaking in the subjoined practical lessons. "Always depend on young plants if you wish to exhibit. Never leave more than one stem; and if you intend to show single blooms, thin out to a great distance; you can thus get blooms eight or nine inches in diameter. Never allow laterals, and cut the crown out of the stem in its early growth, if likely to get too high; this keeps them dwarf, and gives extra strength to the blooms; hollyhocks are very fond of water in the growing season, and plenty of liquid manure, but can not be kept too dry in the winter, if they do not flag. I always keep my plants in a cold frame through the winter, and turn out into good, deep, rich soil about April; my idea of the shape is that the guard-petal must be thick, round, and smooth, the center well filled, and all free from notch or pocket. I also think that half a globe is a little too much for the rise in the center, but it must not be much less."

Mr. Parson's notions of perfection differ very little from "The Properties of Flowers." His lessons on growing them are worth a dozen volumes by persons who can not either grow the flower, nor appreciate a good one when they see it. It is quite time the public discriminated between original

writing, and making books of other people's materials.—*Garden Almanac.*

### Directions for Exhibitors of Roses.

THE point which is of the greatest consequence in a stand of roses is freshness, for without this the censor ought to put the stand aside altogether, consequently all other good qualities would be lost. The necessity, therefore, of cutting them at the latest moment before showing must be obvious. But rain, sun, and wind will make every rose on a tree wither and discolor on the edges; we have, therefore, first, to prevent a rose from blowing about, by fastening it firmly to something—an upright rod stuck in the ground is the most simple; next, we must cut away or tie back every shoot, branch, or even leaf, that can by possibility be blown against the rose; the weather will not then have half the effect on the blooms, if we can do no more; but any shade that will keep off the burning sun, no matter how it is contrived, is an additional security, and if this be so placed as also to throw off the rain, so much the better.

We now come to the selection and cutting, and now we must look to the conditions. In the summer months of June and July they should be shown in single blooms, like dahlias, without leaf or bud, because there are plenty of large blooms that will bear this. Select those that are full, but not over-blown, and that do not show their centers. As there are many roses of very nearly the same color, avoid having two alike, because twelve dissimilar varieties or any other number are required, and if they are alike when fully bloomed, it is no use to show they are different sorts. Let them be distinct; and as they will not be all of a size, let the backs be the largest, the center row less, and the front smallest, but have them, if possible, alike for size in each row; nor should we select sorts that are too diminutive, even in the front. Have twelve different colors, if possible, and place them to the best advantage. If two dark ones are at the top corners, have two light ones under them and next them, and again have dark ones under the light ones in the bottom row. If they are to travel far, see that nothing touches their petals, for no flower more easily bruises and spoils. The next grand

point to freshness is contrast. He who can show the most distinct colors, presuming the blooms are perfect, will beat roses double the size which are too much alike. There must be no half-bloomed flowers in this mode of showing.

If the show is in August or September, the kind of roses best adapted for show look well in bunches; and Societies ought to restrict the size of these rather than the number in a bunch, more especially as one stem will comprise a large head of roses in some kinds, and half-a-dozen would look nothing in others. Bunches from three to six inches across are the most effective, and there should be a distinct vacancy between the bunches. Pay the same attention to freshness and contrast, as well as to the arrangement. But Societies should lay down distinct rules, and abide by them. We saw at one country show a stand put up in tubes, with one stem only, but with many buds and several flowers; others had single blooms bedded in moss; others, again, had single flowers, with a leaf and a bud; and although the conditions were that they should show them elevated enough for the under part to be seen, the Secretary himself had his so that nobody could see whether they were capable of holding up the petals, or would fall to pieces if removed.—*Ibid.*

#### Sea-Kale.

SEA-KALE is partial to a light or sandy soil, and the soil must be deep to produce it first-rate. I always secure a depth of thirty inches. A celery bed, in what is termed the Scotch fashion, is a most excellent preparer. These beds with us are about six feet in width, and carry two rows of highly-cultivated kale. I need scarcely observe, that such ground is highly manured, and very deep, and receives a good coating of salt after the celery is removed, which is generally immediately after Christmas, as we employ an early bed for the purpose. The salt, of course, is well incorporated with the soil.

On such a prepared soil I annually plant as much as I force—say about two hundred crowns or roots. The rows are nearly four feet apart, and the plants nearly three feet apart in the row, or rather three feet between each pair of plants, for I plant a pair

of crowns at each station; each pair, therefore, has about half a yard on each side, clear space, to extend on.

Now, it is proper here to observe, that these are young plants of a year old, for I sow a drill annually for this purpose, on rich soil, and cultivate highly through the summer; they are about a foot in length, and nearly an inch in diameter at the crown at planting time. Our planting takes place in the middle of February.

In the early part of May most of them produce blossom spikes; these, however, are not suffered to grow long, for as soon as the plant has two or three good leaves at the base, the blossoms are pinched off. In former years, I used to cut the crown off *below the sprouting point*; but this proved bad practice, although backed by many professionals—as, although Kale will bud at any point, such practice lays the foundation for canker, or vegetable gangrene, to which this plant is much liable. This pinching, or cutting away the blossom spikes, induces a development of a class of young shoots at the collar, which are the very things for future buds, or crowns; and, moreover, no stagnation of the vital action ensues—the root is sustained in continuous play.

In a few weeks, the crowns are found thronged with sprouts of a peculiarly vigorous character, and now a sharp-pointed knife is passed through them, thinning out all but about four on each crown, and, of course, selecting the prime ones.

I need say little more about the out-doors culture of this delicious and universally esteemed vegetable, which finds its way to the table of Princes, from November until the middle of May; of course a due amount of cultivation will be given. I must now bound over a portion of my subject, and chat a little about this forcing. I may observe beforehand, however, that I have deemed it expedient to use a good deal of the charred materials of the rubbish, or weed yard, on every possible occasion, whether in the soil, or as hand-dressings, when dressings are needed. Such substances are well known antiseptics, and, as the Kale is so liable to gangrene, their application would seem a common sense affair. However, I can only say, that in proportion as I have applied such with diligence, my success has increased; indeed, I can not speak too highly

of their application in almost all vegetable culture—involving, as a system of charring does, the destruction of all insects, and the return of a very useful residuum to the ground from whence it had been taken.

During the summer, of course, all flower stems are cut away, and by the end of October, or so, the leaves will be relinquishing their hold of the plant. And now, my practice is to trench out the whole forcing stock, and “lay it in by the heels,” to use a mere gardening phrase, which means, that it is put into the ground as close together as possible. It is covered with soil up to the crown, and, during severe weather, litter is kept constantly over the plants. From hence they are transferred in successive batches, to the Mushroom house, where I have Kale in constant succession, from the beginning of November, until that from the open ground supersedes forcing matters. The forcing it in this situation must form the subject of another paper; for much may be said, and much ought to be said. I do not, indeed, desire to make a more wordy affair of it; but I am unwilling that those who do wish to learn a good practice should be imperfectly informed; for those who do not desire to learn, we do not write; neither for men of experience.

Before closing this paper, let me point to the collateral bearings of this kind of practice. “Rotation of crops” always carries a high sound; a good knowledge of this involves much practical, if not scientific, knowledge; much forecast, and, I may add, it must lead to economy in the end. Here, then, is my plot of “trenched-out” Sea-kale ground, penetrated some thirty inches in depth, and ridged up in November. Who will despise such a plot in March for Carrots, Onions, etc.? Certainly, a bed, fifty yards long by seven feet in width, does not seem a great commercial spec. But it is not for the amount of land I contend, but the principle—the present and ultimate economy. Sea-kale stands classed in my rotation book as a “*Preparer*.” Such a division, or classification of cultural matters is of immense importance; would that all our young aspirants for horticultural fame would condescend to study such genuine utilitarian matters; but the floral taste rules, I fear, supreme. R. EMMINGTON.

—*Cottage Gardener.*

#### Window Garden.

I HAVE read Mr. Wood and Mr. Church's remarks on this subject with interest. With us window gardening has not received the attention which it merits, and which it has received in some parts of France, Flanders, and Germany. I did not, however, mean to speak of window gardens, as ordinarily managed, but simply of a series of double parts in section across the window, so as to permit the growth of ferns, and certain bulbous plants in the interstices. It would be only necessary to groove or chamfer the inner portion of the frames or sashes, when the pane, being cut to its proper dimension, would slide into its place, and retain it, without prejudice, otherwise, to blind or shutter. It is then requisite to provide a shallow, narrow zinc pan, to contain a little moist earth, to insert a fern or two; and the whole is complete. The pane may at any time be lifted out, while the expense is so trifling as to permit the adoption of the arrangement in the humblest household.—HENRY M'CORMAC, M.D., Belfast.

#### The Pleasures of a Garden.

CUTTING my last bouquet for the present season, on the 13th day of November, I fell naturally into a train of reflections upon the events of the past, and the pleasures of a garden; not a garden made classical with statues and rare vases, delighting in sparkling fountains, ornamented with palatial arbors, or rejoicing in cool grottoes and secluded walks—though, when it has been mine to enjoy such rarities, I have enjoyed them with a relish unsurpassable—but the pleasures of a garden, unpretending in its character, and narrowed in its area, such, indeed, as may belong to a poor office-writer, with a stipend not exceeding the wage of an ordinary skilled mechanic, and opportunities for its culture most limited. Yet, still, my garden has its pleasures, sweet, and not transient; still it is a delightful thing, the “concentration of a thousand pleasant objects;” still does memory present, with fond affection, its long array of beauties unfaded; and many days of gloom, and hours of monotonous toil will be relieved to myself and my old office-chair by pleasant reveries on the flowers that were, and fond anticipations of those to come.

And shall I tell how pleasures so simple have been so sufficient? how, with opportunities of the most limited degree, I have needed never to repine? and how my daily bouquet has rarely, for eight months in the year, failed me? Two short rules have sufficed. I have confined myself to flowers of the easiest culture, and have learned to be content with results easily attainable and within my reach. Early-rising has compensated for long office-hours, and afforded time for those little attentions, in themselves so sweet and so delightfully requited. Strong health has been given to me for a seeming sacrifice of rest; and nature, seen in her dress of richly-spangled dew, more gorgeous than diamonds or orient pearls in beauty, has been my daily enjoyment. Then, indeed, are many glories of nature most glorious; then are her sweetest odors poured forth; then it is we are most ready to sing with Wordsworth:

"God made the flowers to beautify  
The earth, and cheer man's careful mood;  
And he is happiest who hath power  
To gather wisdom from a flower,  
And wake his heart in every hour  
To pleasant gratitude."

Then it is when "pleasant gratitude," rises most spontaneously to the Author of all good for the richly-varied beauties around us; then is the pansy most pleasant, the pink most delightful, the wall-flower most sweet, the rose most charming; then strongest within us is the love of those sweets

"Which comfort man in his distress,  
Which smile when he is gay;  
Their fragrance and their loveliness  
They yield him day by day;  
For patience and for humbleness,  
No servitors like they."

And fostering them we reap a rich harvest of peace and content. Such peace, and such content, such pleasures as have been reaped by a poor office-writer, may be realized by every one; and it will gratify his fervent wish if his brief reverie shall conduce, even in the least, to a wider diffusion of the pleasures of a garden.—*Turner's Florist.*

#### Hydrangea Hortensia.

This is quite hardy enough to stand uninjured, out-of-doors, in the southern parts of the island; and though the top parts, farther north, are often destroyed by the frost, it will often send up flowers from its

lower buds, just as in such cases is done from a Fuchsia stool. Where plenty of light can be obtained to mature these lower buds in summer, a protection of moss, thrown over the bottom of the plant in winter, would save the plant sufficiently to bloom out-of-doors in summer. As a denizen of the green-house, however, we have to do with it here, and there it is not only always attractive, whether as a small plant with one flower, or a large one with many flowers, but a well grown specimen always testifies to a considerable amount of pains-taking effort. It is easily propagated, either by the older shoots, or those merely two or three inches in length, which is often necessary to thin out; the latter strike very quickly in a slight hot-bed. With nothing but a green-house, you will not have much of flowering plants next season, unless you can grow them extra well. You are quite as likely to have a flower this autumn, or two months hence, if the young shoot you have selected proceeds from a well ripened bud. Your flowers, next season, depend upon the maturing of your young shoot or shoots this autumn. The having your plants struck any time this summer and autumn, and keeping the plants in a cold pit, or in a cool, shady place during winter, in the green-house, will give you an advantage over spring propagated plants.

I shall describe the treatment necessary for a young plant next season, and that will also show what is wanted for the present. Nothing is so grateful for the aid of a hot-bed, either when striking, or when you are starting the plant into fresh growth in the spring. Sandy loam and decayed cow-dung will grow the plant well. A seven inch pot will grow a nice plant, with from one to three large heads of bloom. For a large plant, a twelve or sixteen inch pot will be necessary. With nothing but the green-house, the growth will be less rapid, and you must delay operations until the sun has gained strength, in March and April. Then, as your small plant pricks up its ears and grows vigorously, give it a shift into a larger pot, as it requires it, and according to the size you wish it to attain. If to be large, you will require to stop it in April, that you may double or treble your number of shoots. As, when growing, it is a regular drinker,

you may humor it by setting the pot in a saucer seldom destitute of water. By the middle of June, unless the plant stands in a roomy, open, light greenhouse, you may plunge your pot in the open garden, shading the plant for a few days at first, mulching it with well decayed dung, supplying with plenty of water, and twisting the pot round, once a week or so, to prevent the plant freely rooting through. By the end of August, water should be gradually withheld, so as to assist the hardening of the shoots and the ripening of the buds. By the end of September, the less rain that falls on the plant the better. By the end of October, house in a cold pit, or beneath the stage in a cool green-house. Where there is a hot-bed, or a hot-house, the plant may be excited into growth any time after Christmas; of course, with a green-house alone, you must wait until the sun gains strength. A key-note to the culture will at once be apparent, if it is recollected, that it should be pruned, thinned, and grown similar to a *Vine*; the flowers on the points of the shoots this season, coming from well ripened buds, formed on the shoots of the preceding year, a fact which generally renders the best appearances in pots, to be produced from plants comparatively young. When growing and blooming, they deeply r. lish almost everything in the shape of manure

water. Growing rapidly, maturing thoroughly, and resting quietly, are the secrets for obtaining immense heads of bloom, in the future, from a little excitement and nourishment.

A friend lately complained that he had some young plants from a blue flowering kind, and he thought he was done for, because his plants all came pink. Nothing of the kind. The color of this plant can not be propagated. It depends on circumstances, such as soil, etc. I have failed, with all my scheming, at one time, to get a pink flower. I have equally failed at others to get a blue one. Frequently, I have had several shades of both on the same plant. Iron filings, mixed with the soil, and watering with a weak solution of alum, will frequently yield a beautiful blue, but not always. The loams of Hampstead Heath, and Wimbledon Common, generally produce this result, as do several peat earths found near Edinburg, Berlin, and St. Petersburg. An oxide of iron, or the presence of alum, is generally supposed to be the cause; but I think there is great uncertainty in working out, at all times, such a result. I have not, however, experimented for some years, and shall be glad to know if recent experiments have been more decided in their result.

—*Cottage Gardener.*

R. FISH.

## Pomology.

### STRAWBERRIES—SEEDLINGS.

In my recent visit to New York, I was at their Horticultural Exhibition Room. I there saw a plate of white strawberries, called the White Bicton Pine. It is from England. One of the berries measured four and a half inches. It is of a light pink color, on the side exposed to the sun. It is hermaphrodite, and if the crop of this year is but an average, it is a good bearer. I do not deem that it will be valuable for extensive cultiva-

tion. It is a sweet fruit, and too soft to carry to market. I bought a root of it, and will send plants for distribution as soon as I have them. I also sent a quantity of the seed, which is planted.

I was there advised to put ice over the seed, before planting, and insure the seed growing in five or six days. I planted some according to these directions, and some in the old way. If there be no difference in

their time of starting, I shall attribute it to my want of faith. Should you make a like trial, I fear you would not be more fortunate, as you set your experience of twenty years in cultivating Hovey's seedling, against the doctrine of Mr. Downing and others, of a change in its sexual character by heat. In other words, converting the blushing maiden to the masculine gender, by more heat. You say, if this can be done by increasing the heat, why should it never occur in the open ground, where, some seasons, the difference of heat is greater than we are told is necessary to produce the change under glass. But you will recollect that Mr. Downing's change was in the open ground, and that all the plants changed to the male gender. But you are unreasonable. You will, in answer to this, say that, in proof of the change, he sent plants to Boston, when Mr. Hovey, and all their strawberry growers pronounced it a different plant. Miracles abound in these days, and when I believe that Hovey's seedling changes to a staminate, I shall believe it will also change the shape of the leaf, and its other peculiarities, by which we readily distinguish it from all others, where we have cultivated it for years. We do not cultivate the Alice Maude. It is said to resemble the Hovey. But, gentlemen, the strawberry question is *settled*. Read an editorial article in the *Prairie Farmer* of the present month. Mr. Meehan's changing the sexual character of the pistillate plants into staminate by forcing, is thrown into the back ground. The Editor's plants of Hovey, Hudson, and Necked Pine, and other pistillates, have changed to staminate, in open ground culture. Who dare doubt the assertion of a Horticultural Editor, on whom we all rely for accurate information?

Yours, respectfully,

N. LONGWORTH.

#### Strawberry Culture.

R. G. PARDEE, Esq., of Palmyra, after recommending a thorough preparation of the ground for the strawberry, suggests the following application to the plants, previous to the bearing season. He says, "Instead of manuring good soils, the better way is to water the plants freely in the spring, once a week until they blossom, with a solution ordinarily of one fourth pound each of Sal Soda, Nitre, and Glauber Salts, with one to two ounces of Ammonia to six gallons of water; or, if I wish to obtain very fine berries, I make a better solution of one-quarter pound each, of Nitrate of Soda, Sulphate of Potassium, Glauber Salts, with one to one and a half ounce of Sulphate of Ammonia, to six gallons of water. The Nitrate of Soda and Sulphate of Ammonia, I was unable to find in many of the largest drug stores in New York. I at last obtained them of William Burgher, Cortlandt street. Water the plants if needed, intermediately with pure water, or occasionally soap suds form the wash.

Fall and spring are good seasons to transplant, but I consider the 1st of July preferable, when the ground can be thoroughly prepared, and good plants obtained, for after that the ground is not liable to pack or bake so hard as in June, and if the plants grow unchecked, a full crop of fruit may be received from them the next season.

The plants are to be transplanted with great care, preserving as entire as possible, all the small fibrous roots, and never permit a hoe or other instrument to work within six or eight inches of the plant, for it would certainly destroy a multitude of those fibrous roots, and essentially maim the plant.

Mulch freely with tan-bark, saw-dust, or other litter free from seeds. Fresh rowen or green grass in the early spring is also excellent.

A block of ground fifty feet square, with only ordinary care and ordinary productiveness ought to produce for a family twelve to fourteen bushels annually of this delicious fruit, or a bed five feet by twenty-five with good care will yield more than one bushel easily.

It is very apparent that a large proportion of all the labor bestowed, even by professed gardeners, on the cultivation of the strawberry is lost, owing to want of know-



ledge how to cultivate it properly, or the want of a simple acquaintance with the habits of the plants. The labors bestowed by most ladies on their flower beds is also mainly lost, for the want of a little thorough knowledge on that subject.

Water is to be applied when needed, and plaster to be entirely avoided.

Most strawberries will bear, if allowed to run, so as nearly to cover the entire space of ground. Others, like the British Queen, Boston Pine, Willey, etc., do better in rows or hills.

The analysis of the strawberry plant and fruit exhibits to us what should be the application of specific manures in solution. The fruit contains 21 parts of potash in 100, 14 parts lime, and 27 parts soda, etc."

#### The Strawberry Question.

"We invite attention to the article in the present number, on what has been very undeservedly magnified into "*one of the great questions of the day.*" We have entertained these views for many years. The high source from which the article emanates, entirely supersedes any remark of ours. This "*strawberry question,*" so called, has always seemed to us one of the *most simple*, a mere matter of fact, and it has been a matter of wonderment that so much should have been said and written, and such formidable resolutions passed, on what is at last comprised within the limits of a mere nut-shell."  
—*Penna. Farm Journal.*

THIS topic has engaged much attention in many of the periodicals devoted to the cause of agriculture and horticulture; but, alas! it is too often the case, Mr. Editor, that quires of paper and oceans of ink are wasted, in conveying from the mind of the writer to that of the reader, thousands of words explanatory and descriptive of mere *theory*, without the simple observation of *facts* necessary to establish, or sufficient to overthrow, the whole. Give us the *experimentum crucis*, or, as Franklin might have said, the *experimentum fish's*—in plain English, use your eyes and all the difficulty vanishes.

I should apologize for asking your readers to look once more upon this topic, already worn sufficiently threadbare; and upon which yourself and many others have so completely occupied the field, as to leave nothing for me to communicate. My apology is this: the July number of the Farm Journal, the leading newspaper of its class in Pennsylvania, and one extensively read there and elsewhere, contains an important article from a distinguished botanist, whose *dicta* are of high authority throughout the Union, but who does not appear to view the abnormal defects and peculiarities of the strawberry blossoms as marks of permanent varieties, but as accidental aberrations from the natural state. Indorsing this article, the editor expresses his surprise that so *simple a matter* should have become "*one of the great questions of the day.*" He claims to have entertained *these views* for many years, (meaning, I suppose, those of his learned correspondent.) He considers this strawberry question "*one of the most simple—a mere matter of fact,*" and he wonders that so much should have been said and written upon so small a matter. So, indeed, Mr. Farm Journal, do we *wonder*; but then our amazement is, that with all the learning of the Egyptians, (and from them down,) with which you and your great luminaries are endowed, your eyes should have been blinded to the simple observation of facts, and that you are thus prevented, by the dusty lore of the ancients, from making your own observations of nature! The whole thing is indeed "*comprised within the limits of a mere nut-shell,*" but you good folks over the mountains appear to lack the energy and ability of the nut-thach, and have not yet been favored with the precious morsel contained *within* the shell.

So much for the editor, who is supposed to be the son of the botanist, W. D., of West

Chester, Pa.; who can be no less than the venerable William Darlington, whom all lovers of the delightful study admire and revere, but whose age and standing do not screen from animadversion when he, who has spent a long life in careful observation, now attempts to decide a question without sufficiently observing the phenomena of nature. His learning, his fame, and the interesting cases he cites, are well calculated to give his paper a sort of authority and weight, especially with the filial editor, which it does not possess with those who can see at a glance that he has not been heretofore familiar with phenomena in the peculiarities of the strawberry's inflorescence, that have been long noted by those who have critically observed and studied them. We all agree that dogmatism is not argument, and that, in natural history especially, all questions should be settled by facts; but W. D., in noticing one of Meehan's strawberry plants, cites the fact of one cyme bearing *pistillate* and another *perfect* blossoms, both coming from the same crown and root, in evidence that change may occur. This he introduces as a new fact, showing that he was ignorant of its being a characteristic mark of some varieties, as long since set forth by our writers, but which we have never been able to detect in thousands of closely watched specimens of other kinds.

The writer is a sound botanist, and guards us against confounding the changes which he claims to have witnessed with "*transmutation of one kind to another*," but, unfortunately, he was not familiar with the characters of Eberlein's seedling, or he would not have quoted the peculiarity above alluded to as a novelty. What we claim respecting the strawberry, as I understand it, is, that there are many varieties, more or less distinct, each having peculiarities in the blossoms, leaves, fruit, etc., and that each is a

distinct individual, similar in all its extensions or runners, each of which continues for an indefinite period to present the characteristics of the original seedling plant from which they emanated. This opinion is based upon sound physiology, and confirmed by careful observations of thousands of plants of the given variety. To the learned botanist, however, we must all concede the honor of having discovered what he calls *neutral* flowers, a term that is new to us, and needs an explanation.

Another point is alluded to by the great botanist, to which a passing remark may be hazarded: In his scientific language he admits that the *fruit*—i. e. seed—require the presence of a staminate flower for their impregnation, but he appears to think that the fruit of the market and table—i. e. berry, what everybody else means by the word *fruit*, but what he calls the *enlargement of the receptacle*, which affords an *esculent substitute* for fruit—may become enlarged and luscious without any impregnation of the seeds or true fruit. I shall not claim any boon from him nor from the scientific world for the assertion, founded upon repeated and extended observation, that *no pistillate strawberry will furnish esculent fruit* when deprived of the *farina of the anthers*: the enlargement of the esculent portion or nidus of the seeds proceeds *pari passu* with the maturity of the impregnated germen. Of the truth of this postulate, I beg leave, Mr. Editor, to refer to yourself.

In the same number of the Journal, and upon an adjoining page, is a communication from William R. Prince, who takes, what I consider, the true ground; unbiassed by any botanical prejudices, he appears to be a plain, matter-of-fact man, who has used his eyes to some effect, and very extensively too among this class of plants, if we may judge from his voluminous articles descriptive of

varieties he has cultivated,—see *Farm Journal and Horticulturist*. He explains Mr. Meehan's case upon the same principles which I find adduced by one of your correspondents, and suggests that the gardener had two varieties, taken inadvertently, and which might have been so similar in their foliage as not to have attracted his attention. Feeling that I owe you and your readers an apology for this long story upon a stale topic, I remain yours,  
 Strawberry Bank.

HORRUS.

### Worms and Bugs.

MR. EDITOR:—In addition to the notorious Curculio, and nasty little slug, which have for the last eight or ten years been spending their fury upon our fruit trees and fruit, we seem at this time to be visited with an army of unwelcome visitors, so numerous that they threaten utter extermination to all that claims to belong to the great family of apples. Many of our trees, especially young ones, look to-day as if they had been scorched by fire, and some are left entirely leafless. I have an orchard of one hundred and twenty trees, of this year's setting, which now appears to be a forlorn hope, and, unless new leaves immediately put out, must be a total failure. Several gentlemen in this vicinity inform me, that their young scions have been stripped of their leaves, and seem to be dead. What will be the issue we can not tell, for this ruthless foe is quite new among us, or else he has never before done sufficient mischief to attract attention. I believe some denominate them "the army worm," but I think from their habits, "navy worm" would be more appropriate. They are about half an inch in length, brass colored head, bodies light green, with two dark stripes running along their back, have six legs, besides numerous pro legs, and a kind of locomotive apparatus on the stern, that enables them to back out of danger with astonishing rapidity.

Take one in your hand, touch him on his head, and if he don't move backward with railroad speed, you may conclude he is sick. You give the tree or branch which they hold in possession, a gentle tap with the

hand, and you may see any number of the rogues, swinging in the air, upon threads of gossamer, which have been manufactured almost without your notice, from the leaves of your noble fruit tree. Take a view of your tree when a heavy dew is on, or on some foggy day, and you will see that all its branches, dried up leaves, and young fruit, are completely entwined and interwoven, with a worthless filmy substance, which has been spun by these poor little green worms. Besides all the above mischief which they do, they seem to be extremely fond of green apples, for almost every apple, on trees badly infested, are eaten to the core.

Now, sir, as editors know everything, I am in for a little of this worm's history. And in addition still, to the above inquiry, I wish to see explained in your Farmer, the mystery of this spume that we find so plentifully in our fields, upon almost every spire of grass, in some instances of whole acres.

There is a variety of opinions down here, in the old York county, about all this spittle, and what the true character is of the insect, which finally comes from these castles of froth; some say they are flies, others that they are bugs, while others affirm, that the issue is simply a miller; they act like grasshoppers. Pray tell us what they are, and how they can spit so much?—O. S. H.

NOTE.—The worm which our correspondent mentions, and concerning which we made some remarks in our last, is new to us. We know nothing more of its history than it has appeared this summer in immense numbers, and over a wide extent of country, and is doing great damage to orchards. In regard to this other "bug" that is found so plentifully in York county, spitting on the grass, he is an old settler.

He is a good-natured, frothy fellow, and, we believe, perfectly harmless, although he has been accused of doing mischief. Some think he is the father of all grasshoppers; and we once heard a man accuse him of being the cause of the potato rot, and for no other reason, than because he saw they were very abundant, during the season the potato rot was very severe.

Now he is neither a grasshopper, the father of a grasshopper, nor the son of a grasshopper.

They generally are most abundant in dry seasons; or at any rate the spume, or froth, with which they cover themselves, is most seen then; we suppose because the rains do not wash it away. It belongs to that genus of insects which naturalists have called *cicada*, and the one referred to by our correspondent is probably the *cicada spumaria*, more commonly known by the name of "spittle bug," "frog hopper," "cuckoo spit," etc. It is an active insect, and the male is said to make a low chirping noise, while the females are mute. What the nature of this froth or spittle is, or why it is necessary that the insect should be enveloped in it, we do not know. Some think it serves to keep off the attacks of enemies, as they would think it useless to dive into a bunch of spittle for their dinner. We leave it to our friend O. S. H. to ascertain "how they can spit so much," as they probably don't chew.—Ed. *Maine Farmer*.

#### The Curculio Premium.

THE readers of the Western Horticultural Review will recollect that a liberal premium has been offered by the Cincinnati Society, for a "cheap and efficient remedy against the depredations of the Curculio, \$100.00."

Many persons have been stimulated to make experiments upon this insect, which will result in a better knowledge of the rascal's habits, at least, and thus we may expect to become better able to provide against his attacks. One point should be mentioned, which, perhaps, many persons who claim successful treatment, have overlooked; that is, that the numbers of the invaders appear to be irregular in any given place, during different years—for we find some orchards that have lost all their plums during a series of years, when various remedies were employed, so that the owner felt disposed to give them up in despair, will now and then furnish a splendid crop of fruit, when utterly neglected—the result must here be attributed to the absence of the *vermin*s.

Among the competitors for the premium,

a correspondent from Washington, D. C., has recently applied with a *certain remedy*—the communication was referred by the Society to its council, who reported back, that they had discovered nothing new in the plan, that of pasturing with pigs, poultry, and sheep, (except the latter,) and that with all the light at present before them, as to this mode of treatment, there was rather more testimony adverse to its efficiency than otherwise. A committee has been at work observing the results of different methods in this neighborhood, and will probably render a valuable report, which I do not wish to forestall.

#### Song of the Strawberry Girl.

ROCHESTER, New York, July 8, 1853.

DR. WARDER: *Dear Friend*—I regret to learn through your Magazine that your health is impaired, and that you are suffering much with your eyes. I trust time will return the blessing of sight, and that bodily you soon may be well again. Appropriate to your Magazine is the enclosed, "Song of the Strawberry Girl," taken from the Journal of Commerce. I would like to see it grace a page of your paper, and beg you will publish it. We are now in the midst of the cherry season. The "cherry birds" have left us a plenty, and as there are some fifty varieties grown with us, we have quantities of good ones.

Mr. Longworth's wines are now on sale here, and the first time I get a taste of the "Sparkling Catawba," I will drink success to Ohio and the fruit growers there.

Yours, truly,

JAMES H. WATTS.

It is summer! it is summer! how beautiful it looks!  
There is sunshine on the old gray hills, and sunshine  
on the brooks;  
A singing-bird on every bough, soft perfumes on the air,  
A happy smile on each young lip, and gladness every-  
where.

Oh! is it not a pleasant thing to wander through the woods,  
To look upon the painted flowers, and watch the opening buds;  
Or seated in the deep cool shade at some tall ash-tree's root,  
To fill my little basket with the sweet and scented fruit?

They tell me that my father's poor—that is no grief to me

When such a blue and brilliant sky my upturned eye can see;

They tell me, too, that richer girls can sport with toy and gem;

It may be so—and yet, methinks, I do not envy them.

When forth I go upon my way, a thousand toys are mine,

The cluster of dark violets, the bunches of the vine;  
My jewels are the primrose pale, the bind-weed and the rose;

And show me any courtly gem more beautiful than those.

And then the fruit, the glowing fruit, how sweet the scent it breathes!

I love to see its crimson cheek rest on the bright green leaves!

Summer's own gift of luxury, in which the poor may share,

The wild-wood fruit my eager eye is seeking everywhere.

Oh! summer is a pleasant time, with all its sounds and sights;

Its dewy mornings, balmy eves, and tranquil, calm delights;

I sigh when first I see the leaves fall yellow on the plain,  
And all the winter long I sing—sweet summer, come again!

#### Fruit Culture in Europe and the United States.

THE readers of the horticultural periodicals of this country have sometimes been favored with the remarks of pomologists traveling through Europe, comparing either the fitness of those two countries for fruit culture, or the comparative skill of the inhabitants in this respect; but I believe that some of them are got up in such a manner as to lead the reader into error.

If we compare, for instance, the culture of the apple, pear, or peach, of old England,

with the best fruit countries of the United States, such as the southern borders of the lakes, or the middle Atlantic states; or the latitude north of fifty-one in Europe with the country south of forty-four in America, there can be no doubt that we beat them in every respect; but in this way we are far from getting a true idea of the matter.

Alexander Humbolt says, in his *Geographic des Plantes*, when speaking of cultivated vegetables or trees, "Plants are the most sensible thermoscopes; the more or less success with which they are cultivated indicates the smallest climatic differences." Long experience has shown to the inhabitants of Europe which are the kinds and varieties of fruit which will best succeed with them, and a careful observer will find that every province, or even every district, cultivates different varieties of fruit from that of neighboring provinces, either for market or home consumption, and that only the garden of amateurs or nurserymen contain long lists of varieties.

But, to compare with more certainty, let us select one spot in Europe, for instance, the country around Colmar, in the upper Rhine department, in France. Let us see how fruit sells at retail prices in the markets of that city, which contains about 30,000 inhabitants, and lies in a thickly peopled, manufacturing country, connected by railroads with Strasbourg, Basil, Paris, and Havre, where land is dear, and every article of food commands a high price, and meets with a ready market.

The prices here given are those for 1851 and '52, which years were below the average in those crops. A "pound" means the half kilogramme, which is a little more.

Cherries, heart and bigarreaus, 2, 3 to 4 cents per pound.

Plums, prunes, best quality, 3 to 4 cents per 100.

Green gages, 6 to 8 cents per 100.

Mirabelles, 4 to 5 cents per 100.

Apricots, good common, raised on standards, 20 to 30 cents per 100.

Peaches, not many raised there on standards, common sorts, 30 to 40 cents per 100; choice peaches, raised on walls, 2 to 3 cents each.

Grapes, Chasselas, Muscats, and other fine table sorts, 50 to 75 cents per bushel; common good sorts, 30 to 40 cents per bushel; retail 1 to 2 and 3 cents per pound.

Pears, common sorts, 20 to 30 cents per 100; choice Bonchretien, Bergamottes, Beurries, 50 to 75 cents per 100.

Apples, common, 8 to 12 cents per 100—25 to 30 cents per bushel; choice Reinettes and Calvilles, raised on dwarfs, 40 to 60 cents per 100.

Quinces, about 2 cents each, for best quality.

English Walnuts, 3 cents per 100.

Currants, 3 cents per pound.

Strawberries, 3 to 4 cents per quart.

Besides these kinds there are also cultivated about that city, in the open ground, Raspberries, Sorbes, Medlars, Melons, Figs, Cornelias, Cherries, Filberts, Gooseberries, hard-shelled Almonds, and Chestnuts.

The sweet cherries and prunes are some seasons so abundant that large quantities are allowed to ferment in closed casks, and are distilled into brandy; wines of inferior sorts often sell at 8 to 10 cents per gallon.

On the opposite side of the Rhine, in Baden, fruit is at least 30 per cent. cheaper, there being only ten manufactories, and therefore less dense population. In all the departments of France which lie north of latitude 48, the peach trees do not succeed well on standards. All the finer qualities are raised on walls in a southern exposure, to get sufficient heat to ripen the fruit well; for the same reason all the finer varieties

of pears and apples are raised on dwarfs, where they receive more heat by being closer to the ground.

Ns. RIEHL.

St. Louis county, July 27th, 1853.

#### Meeting of the North-western Fruit-Growers Association.

FRIEND WARDER :—In the absence of our corresponding secretary, F. K. Phoenix, I suppose I ought to have written official notices of our Chicago meeting of fruit growers, to be held October 4th to 7th inclusive. But, judging from my correspondence and personal observation, during three long journeys, there will be little need of further trumpeting the matter; for our western pomologists are making ready for the greatest meeting of the kind the world has ever witnessed, and I have not the least fear of the result.

Fruit is unusually abundant throughout the west, though a few local complaints reach me, of the early blighting, or blasting, of the promising "sets;" and the recent drouth, in many sections, may dwarf the specimens, and prevent our "enlarged Yankees" realizing their expectations of astonishing any of their eastern progenitors, (who may attend our meeting,) with the enlarged size, and increased fairness of our fruits. And yet, we have nothing to fear, in the way of comparison, except in the number of varieties; and we shall not fall so very far behind in that respect. Many western men will show apples and peaches in great variety; and one has just informed me that he has forty sorts of pears in fruit.

But let me tell you what we propose doing. We hope to be able to compare fruits from the most distant western localities, and settle questions of identity, history, nomenclature, and adaptation to soil and climate, as well as comparative value for local and general cultivation. In doing this

we intend to take up the catalogue where we left it last fall, and not renew the discussion of sorts heretofore considered, until we have finished the list of those which have been proved in the west,

It has been suggested, too, that we should try and establish a western standard of height and shape for nursery trees, and also a tariff of prices, based on age and variety, rather than mere size, and on the form of the *head* of a tree, instead of its extreme *altitude*.

As we are to have a four days' meeting, and three sessions per day, it is probable that we shall be able to go through the catalogue; and, with a regular reporter to aid our industrious secretary, Daniel Edwards, we may hope to preserve most of our sayings and doings for future reference.

The new court house, or one of the large city halls, will be the place of meeting, and we intend to organize promptly at 10 o'clock, Tuesday morning.

Papers and specimens, from those who can not attend, may be sent to the Prairie Farmer office, or to Dr. J. A. Kennicott, No. 96, Lake St., Chicago.

Cordially yours, JOHN A. KENNICOTT,  
President N. W. F. G. A.

#### Permanency of the Sexes of Plants.

DR. WARDE: *My dear Sir*:—I forward the following letter from a friend, together with his "puzzler." It will doubtless interest some of your readers, as well as bear upon a recent "vexed question."

Sincerely yours, THOMAS MEEHAN.

"Dear Friend:—Since I last wrote to you, I have got into a fix with ———, on the unchangeable character of the sexes of plants. He is a strong advocate of your views. I have always insisted with him, as with you, that I consider nature, once fixed, unchangeable. I have grown pistillate kinds of strawberries for years, and never noted

a single variation in their character. I expressed my belief positively, that for a pistillate plant ever to produce an hermaphrodite flower was utterly impossible; that it was contrary to the immutable laws of nature, and that he might as well talk of changing the sexes of animals by management, as to influence those of plants by any circumstances; and in order to show him the honesty of my convictions, I backed my statement by the offer of a considerable sum for any instance to the contrary.

"I was rather surprised this morning on receiving the enclosed—a real *hermaphrodite melon flower*. Of the thousands of melons that I have raised, and the hundreds that I have "set," when grown in frames, in Scotland and England, in all my long experience, I never heard of such a thing in any situation. Being a firm believer in the monœcious character of the plant, it certainly is to me a puzzler. Whether your views of the strawberry question are right or wrong, I must now admit that pistillate plants [flowers] may, under some circumstances, become hermaphrodite. \* \*

"Yours truly, ———."

P.S. I might not have troubled you with the enclosed, Mr. Editor, but both of us being unfortunately (according to one of your correspondents) Europeans, originally, our eyesight may be so defective as to imagine we see a thing when we really do not. You will please verify our specimen, if we are correct in its character. T. M.

Holmesburg, Penn., July 23, 1833.

I acknowledge my indebtedness to Mr. Meehan for the curious specimen above mentioned. The flower was received, but in such bad condition that it was impossible, with any care, to examine it satisfactorily. Had it been opened with a knife, and pressed between pieces of bibulous paper, it might have been preserved. I thought I discover-

ed the two classes of organs—stamens and pistols. This is indeed a very interesting aberration from the usual type, but is not a

parallel case to the strawberry. Such instances, however, should teach us caution about asserting impossibilities.—Ed.

## The Vineyard.

### THE HERBEMONT GRAPE.

*To the Cincinnati Horticultural Society:*

GENTLEMEN—I wish to draw your attention to the Herbemont grape, with the hope of inducing you to recommend its extensive cultivation as a wine and table grape. The bunch is of fair size, skin thin, pulp soft and juicy, and of fine flavor. It is hardy in this latitude, and the most vigorous grower, and in this respect surpassing all others. The wood is of a peculiar color, and the vine is resembled by no other one, except a native grape sent me by Mr. Thatcher, of this State, and may always be distinguished even in winter.

The origin of the Herbemont is unknown. Some persons have contended that it is a foreign grape, and they infer this, as there are but few foreign grapes of similar size, equal to it as a table grape. As we have never found a foreign grape of so vigorous a growth, and so hardy, I have always classed it with our natives. Since I obtained the grape from Mr. Thatcher, I consider the question settled. It is difficult to point out any strong difference in the vines, or the bunches of fruit. The fruit of the Thatcher grape has some of the qualities, and the appearance of the Herbemont, but is inferior for the table and wine. As a wine grape, I do not expect to meet the superior of the Herbemont, till we cultivate seedlings from it, and from other native grapes of good quality.

The singularity of the wine is, that it has

the aroma and flavor of the Spanish Manzanilla, (Mansinella,) but superior. Mr. Cozzens, of the wine house of Bininger & Cozzens, of New York, was surprised to find a native wine of its character, and, as a still wine, preferred it to the Catawba. I am inclined to believe that a porous soil is most suitable for its cultivation, and that no grape will prove as valuable for wine or the table, on the rich and beautiful hills in Kentucky. I shall be pleased to furnish seed of this grape next fall, to vine dressers who wish to experiment.

A strange notion prevailed in Europe, some years since: According to their doctrine, if you wished to surpass the Catawba grape by one of like aroma and flavor, you must not plant its seed, but go back to its great grand father, the fox, (*charter oak* plants, for which many persons last spring paid \$5 a piece,) whether to use as wine and table grapes, or common balls, "this deponent saith not." But many persons will say, with European writers, "seedlings will not bear till nine or ten years old." I am past 70. Yet I yearly plant hundreds of seedlings, and hope to see many of them in fruit. I have some two hundred seedlings, raised in the open ground, two years old last spring, to which no special attention has been given. Some of these vines now measure between three and four inches in circumference, and have new shoots, from twelve to fifteen feet long. In planting seed



of some varieties of grape, the young plants all strongly resemble the parent. In others there is a change in the color of the wood and shape of the leaf, indicating a change in the color and character of the grape.

That a proper appreciation of the character of the Herbemont vine may be obtained, I would urge vine-growers to visit the vineyard of Mr. Rintz, on Bold Face Creek, four miles below the city. They will there see a vine of this grape, in its abundant crop, I believe exceeding any vine in any vineyard in the State.

I this spring grafted forty new kinds of native grapes. Unfavorable as the season has been, thirty-seven of them are living,

and some of the grafts have fruit, and have grown thirteen feet. In grafting, it is desirable to have the grafts grow long, and to do this, it is necessary to cut or break off the lateral branches. Can this be done without forcing out the fruit buds of the next season?

Some vine-dressers say, if nipped off when one or two inches long, the fruit buds of the next year will not shoot out? Others, that the only safe rule is, to let the side shoots grow from six to ten inches, and then top them. Will either method prevent the starting of the fruit buds of the next season?

Yours, respectfully,

N. LONGWORTH.

## Transactions.

### THE CINCINNATI HORTICULTURAL SOCIETY.

THE weekly meetings of this society have been well attended during the month of July, and the objects exhibited, fruits especially, gave ample occupation to the members to the exclusion of those interesting discussions which gave attractiveness to many of the previous meetings. We have this season been favored with a plentiful crop of apples, a fair crop of pears, some apricots and nectarines, and a very large quantity of peaches, but they have all, and more especially the early peaches, suffered from the disastrous dryness of the months of May and June. The "Curculio," owing to various causes, as well as the active exertions of our cultivators, in the shaking and other processes for its extirpation, has been less destructive than usual. We have, therefore, had a very acceptable crop of plums, and many of them of high excellence. Conspicuous among the best were Bolman's Washington, Imperial Gege, Core Golden Drop, and the Nectarine or Peach Plum, which latter was shown by Joseph Clark, of great size and beauty. A letter proposing a remedy for the Curculio, from Joseph L. Smith, of Washington, D. C., was under consideration of the council, who reported that it had been long known to fruit cultivators, and found to be but a partial remedy. The most satisfactory experiment for the protection of the Plum was the lime and sulphur solution made use of by P. Considine, upon which a favorable report, which we append, was made by Messrs Buchanan, Ernst, and Kelly, the committee appointed by the society. A new Seedling Rhubarb, produced by B. P. Cahoon, of Kenosha, Wisconsin, was exhibited July 16th, one stalk of which, without the leaf, weighed three pounds. The committee to whom it was referred reported highly in its favor as to tenderness and flavor. The stalks were shorter and stouter than those of the "Victoria," and, when cooked, had not

the strong Rhubarb taste to which many object to in the old sorts. Among the principal contributions were from R. Buchanan, eleven sorts early apples, and some fine plums, pears, apricots, also white, pink, and purple blackberries, and Ohio ever-bearing raspberries. (The blackberries were much admired.) M. McWilliams, eight sorts, early apples, also pears and other fruits. A. H. Ernst, six sorts early apples, seven sorts pears, four sorts plums, and some other fruits. P. Considine, plums and apples. William E. Mears, plums, apples, etc. P. Outcalt, pears, plums, etc. R. Hodge, plums in great variety. S. S. Jackson, early apples, in variety. William Heaver, plums and apples. James Hall produced some of the largest and best gooseberries ever shown here. In the flower department, large collections of cut blooms of roses and other flowers were exhibited by William Heaver, Kelly, Evans & Co., and others.

#### *To the President and Members of the Cincinnati Horticultural Society:*

Your committee, as instructed, visited Mr. Considine's place, and were highly gratified at the fair display of fruit on his plum trees, many of them literally bending under their enormous loads. Mr. Considine explained to the committee, and the other gentlemen present, the plan he had pursued to produce such a satisfactory result on trees which had never before perfected fruit. At the recommendation of Mr. M. Kelly, he had mixed six pounds flour of sulphur, one half bushel quick lime, in one barrel water, this he threw over part of his trees with a garden syringe, after the fruit had set in the spring, at two or three different times only. It is to this cause he attributes the protection of his fruit from the ravages of the Curculio.

Mr. C.'s trees are mostly large, probably ten to

fifteen years old, and he assured the committee that he had never been enabled to save any fruit before the application of the above remedy; though, for many years past, his trees had blossomed, and set fruit fully as well as this year, but all had fallen a prey to this little insect. It was really a charming sight to see so many trees so crowded with fruit, without the least evidence of the existence of such an insect as the Curculio.

After having examined these trees, Mr. C. took us to the other trees, to which this remedy had not been applied. On them but little fruit was found, it having mostly dropped off. Mr. C. states that they were equally as full set in the spring as the others, and he deemed that the circumstances surrounding them, as to soil, etc., were about equal. The difference in the quantity of fruit was certainly remarkable, and induces the committee to recommend to plum growers the application of this cheap, simple, and safe compound, next year, in order fully to test its merits. Should it prove successful, there is no calculating its immense value to the cultivator in adding this delicious fruit to the luxury of our desert. Mr. C. has been in the practice, in former years, of using lime and gravel around the trunks of his trees, but to no good effect. In examining the few fruit which remained on the trees to which the compound had not been applied, it was found, in some instances, free from the puncture of the Curculio; and at least in one instance where the mixture had been applied, a large portion of the fruit had dropped.

Your committee also examined plum trees in other gentlemen's grounds, especially those of Wm. Orange, Esq. His trees were found loaded with fruit. Some of them he has syringed with salt water, the effect of which was very injurious to the foliage, but to others nothing had been done.

On the grounds of one of your committee there are trees full of perfect fruit, which seldom before matured any, to which nothing was done, but were left to themselves and the Curculio. This is also found the case in other gardens.

Your committee, therefore, while they would decidedly recommend the application of the mixture to all cultivators, not only of the Plum, but to the Nectarine and Apricot, as they are alike the subject of destruction by the Curculio, are constrained to say, although appearances in Mr. C.'s grounds are so cheering and flattering, it may be induced by other causes, not permanent in their duration.

The above is respectfully submitted.

A. H. ERNST,  
M. KELLY,  
R. BUCHANAN. } Committee.

On motion, adjourned.

J. C. JEFFERIES, Secretary.

### New York Horticultural Society.

THE semi-annual exhibition of this Society was held at Metropolitan Hall, New York, on Tuesday and Wednesday, the 14th and 15th of June. The hall was well arranged to show off the plants, and the entrance was tastefully decorated and enriched by fine conifers in pots.

Mr. Cope, of Philadelphia, contributed three leaves of his *Victoria Regia*, which were displayed in a large octagon-shaped tank, in the center of the hall. The show of pelargoniums was excellent, and the specimens by Mr. Chorlton, of Staten Island, and Mr. Hamlin, gardener to W. C. Langley, were well grown, and freely bloomed.

Among the new plants were *Hoyabells*, *Clerodendron fallax*, and *Cryptoceras reflexas*, from Mr. Duncan. *Ixora coccinea* and *Begonia luxurians*, from L.

Menand, Albany; Mr. M. also sent *Stanhopea grandiflora*, *Colanthe veratifolia*, and *Bletia hyacinthoides*, each in full flower. A collection of twelve seedling verbenas was contributed by T. Dunlap. Mr. Lenoir sent *Mazeppa*, Princess de Navarre, and Madame de Sevigne, three handsome French varieties.

### Zanesville Horticultural Society.

Met on Saturday, July 30th, at 2 o'clock, P. M.

Plums were presented by C. Hall, of the Duck Egg, Green Gage, and Sugar varieties; also, by J. L. Cox, Bolmar's Washington, and Duane's Purple, of large size and excellent quality.

Peaches—J. L. Cox presented Red Rare-ripe, of good size and fully ripe.

Apples—Seedlings resembling the Early Chandler, in size and quality, were presented by C. Hall. The same gentleman presented Early Harvest, also Black Mazard Cherries.

### The American Wine-Growers' Association for June and July.

Met at William Heaver's, Reading Road Nursery, Saturday, June 25th, 1853, Dr. Rehfuess in the chair.

A considerable number of members were present on the occasion, many of whom, both before and after the regular business, enjoyed themselves in examining the various specimens of trees, shrubs, and plants, which were there collected. We particularly noticed an interesting group of the rarer conifers contain specimens of *Pice insignis*, *P. pinderow*, *P. excelsa*, *Arancaria imbricata*, *Abies menziesii*, *Amorinda*, *A. Douglasii*, Cedar of Lebanon, *C. Deodar*, *Juniperus excelsa*, *Torreya taxifolia*, *Thuja adpressa*, *Cupressus funebris*, etc.

A bed of Carnations and Picotees also attracted general admiration. Although the excessive drought had operated prejudicially to their full development there were some of the best marked flowers we have ever seen. We also observed for the first time some of the improved English Hollyhocks in blossom; many of our friends may, perhaps, not be aware of the great improvement that careful cultivation has effected in this flower. The viney we found nearly stripped of its produce, having been forced, and the fruit disposed of. The greenhouses were emptied of their contents; but interspersed in the beds and borders, and ranged in various favorable spots, we observed the largest and most varied collection of plants that has come under our notice in the west.

The discussion being upon working the soil in vineyards, the president called on members to state their views.

General M. S. Wade had the ground in front of the walls on which his grapes were trained, dug to the width of eight feet.

B. Hodge said his vineyard was on a very elevated ridge or hill; he preferred the hill top to the slope. His soil was loam, with a substratum of sand ten or fifteen feet below the surface. Much of the upper stratum was sandy, the loam predominating near the surface. His vineyard was in the finest condition; he never lost a crop by rot; believed his sandy sub-soil prevented the rot, and gave a perfect drainage to the land. The prevailing timber on the land was originally sugar-maple. He planted his grapes six feet by four, to enable him to plow between the vines. He plows the vineyard after corn planting—second week in May—finds some roots even in shallow plowing; plows and harrows afterwards, to keep down weeds; objects to severe summer pruning; keeps his vines well stocked with foliage; recommends plowing, as the most economical mode of working the soil.

in a vineyard; after planting the vineyard always plow shallow.

Mr. Buchanan had his vineyard worked in the spring, with the two pronged hoe, to the depth of four or five inches; afterward used the cutting hoe, merely to keep down weeds. He found this method very economical, as his vineyard is on sloping ground; presumed the plow or spade would be appropriate in other situations; did not think either would make much difference in the growth of the vines, it being merely a question of economy. In pruning, he had the tips of all but the shoot for next season's "bow," pinched off before the blossoming, afterward shortened the laterals, and was now having the shoots tied up.

Mr. Sleathe observed that he had this season used the hoe only. He had shallow surface drains through his vineyard, to carry off the heavy rains in the summer; in giving the spring hoeing he preserved the surface of the drains hard. He preferred cultivating with the hoe, as being best and cheapest.

In regard to manuring, Mr. Buchanan stated that he gave his vines well-rotted manure every two or three years, and he thought the vines should be manured wherever a feeble growth of wood showed the soil to need it.

Mr. Heaver suggested the cultivator as an excellent worker for the soil, loosening the ground to the depth of several inches without injuring the roots materially, and eradicating weeds at a much cheaper rate than could be done by the hoe.

The President, Dr. Rehfuess.—The judicious working of the soil has the greatest influence on the quantity and quality of the wine.

The first object of hoeing is to loosen the soil, so that heat, air, and moisture may penetrate, and aid in decomposing the mineral and other constituents, that they may be brought into a state capable of assimilation by the roots of the plants; another object is to destroy weeds. It is impossible to give certain rules as to how or when the soil should be worked, as the nature of the ground, whether hilly or level, the deep or shallow planting of the vines, the lateness or forwardness of the spring, and the varieties of soil and climate, will require dissimilar treatment, and a great deal of care and judgment, as well as a perfect knowledge of the vine is required to determine the proper working of the soil. If the soil is loosened too early, the roots are in danger from late frosts; if too late, and in a dry spring, the vines may dry up.

My vineyard at the back of my house, the aspect of which is E. E. South, soil clayey and retentive of moisture, surface level, and on the summit of a hill, I had hoed in April. My other vineyard on the south side of a hill, laid out in terraces, I did not commence hoeing before the end of May, and owing to the dry soil, and dry weather, about one-eighth of it has not been hoed yet. This spring hoeing should be done six to nine inches deep, and the upper soil turned under.

Plowing, on account of the cost of hoeing by hand, will be more generally adopted in this country, particularly in extended vineyards, where the work could not be done with the hoe in proper time. Ploughing was found to be less beneficial to the soil than hoeing, but as the plough without much cost may be run often through the vineyard, the work may be equally efficient. Besides, a heavy rain may occur, after hoeing, and close the soil against the action of the atmosphere. The object of hoeing would, of course, be lost, and the work could only be done again at great expense, whereas the plough would at a trifling cost of labor restore it to a proper state. One rule is certain, a cold and retentive soil wants repeated working, while a dry and thin soil, on hills, should have much less.

A second but light hoeing is necessary in June or July, to destroy weeds, and give access to the air. A third hoeing is recommended, in Europe, that the heat

may penetrate the soil, and assist in ripening the fruit, the nights being at that season, there, quite cold. This third hoeing is not necessary here, but a hoeing late in the fall, to destroy the "larvæ" of insects, would be very beneficial.

The monthly meeting was held at the residence of Thomas H. Yeatman, on the river road, Saturday, July 30, 1853.

This was, perhaps, considering the number of members present, and the extent and excellence of the collection of Wines exhibited, the most interesting meeting the Association has ever held. The weather was beautiful, and Mr. Yeatman received the members with characteristic politeness and hospitality. Before the meeting organized, the gentlemen walked through the beautiful grounds of Mr. Y., and were shown his extensive wine house and cellars. The excellent machinery and systematic arrangement of the wine house elicited general admiration. The vineyard, one of the best and most showy in America, appeared to be in fine condition. It covers to the very top the southern face of one of the steep river hills, and possesses unusual advantages for thoroughly ripening the grape. The ascent was a trying operation; but when the summit was gained, the view of the magnificent landscape, with the fine vineyard and the Ohio river in front, were ample pay for the toil. The vines were vigorous and healthy, although objection was made to the severe summer pruning they had received. Very little rot was perceived, and the crop of grapes they bore was really enormous.

The meeting organized in the wine house, the President, Dr. L. Rehfuess, took the chair, and M. Kelly was appointed Secretary.

Dr. Mosher proposed that the Association offer a premium for the best cultivated vineyard in the surrounding country, and another for the best sample of native wine, of any age.

Mr. Werk spoke in approval of Dr. M.'s proposal, and recommended that the amount of the premiums should be liberal.

Mr. Graham moved that a premium of a silver cup value \$30, be offered for the best managed vineyard, and also that premiums be offered for the best native wine, of any age, and the best of the present season, samples to be taken from casks containing not less than thirty gallons.

Dr. Mosher suggested a premium for the best sparkling wine.

Mr. Buchanan said he presumed the term *native wine* meant Catawba, or other native varieties; but added, that he had no objection to the offer of premiums for other kinds.

Dr. Rehfuess said he thought the term *native wine* should apply to all wines made from grapes produced in the country, whether of native or foreign origin.

Mr. Yeatman proposed that the premium for the best managed vineyard should not be given to one of less than three acres in extent, and assigned reasons which were generally acquiesced in.

The whole subject was then referred to a committee composed of the President, Treasurer, and Secretary, with instructions to report a schedule of premiums at the next meeting.

The meeting then proceeded to the examination of the Wines presented; but owing to the lateness of the hour, and the great number of samples, many meritorious wines were, no doubt, passed over too hurriedly. It was generally agreed, that at no former meeting were so many good Wines tested—the superiority of the Wines of the recent year proving that the skill and experience of our wine-growers have affected a decided improvement in the quality of our Native Wines, and that our Catawba Grape can be made to produce a wine to gratify the most fastidious palate.

From a careful comparison of the memoranda handed

by members to the Secretary—the standard of excellence being 100—the examination resulted as follows:

NO.	DATE.	MAKER'S NAME.	GRAPE.
20.....	Catawba	—	67.6
34.....	do.....	1852..... Ross.	89.
21.....	do.....	1852..... Bogen.	87.3
6.....	do.....	1848..... Yeatman.	77.6
31.....	do.....	1851..... Rentz.	76.9
12.....	do.....	1846..... Yeatman.	72.6
21.....	do.....	1846..... Yeatman.	77.2
2.....	do.....	1849..... Bogen.	91.4
28.....	do.....	1848..... Yeatman.	58.
5.....	do.....	1850..... Bogen.	76.7
33.....	do.....	1847..... Yeatman.	67.5
10.....	do.....	1852..... Duhme.	82.2
49.....	do.....	1849..... Bogen.	81.3
16.....	do.....	1852..... McWilliams.	80.3
17.....	do.....	1851..... Werk.	83.
15.....	do.....	1852..... Yeatman.	75.6
5.....	do.....	1847..... Yeatman.	59.6
27.....	do.....	1849..... Bogen.	67.3
4.....	do.....	1847..... Yeatman.	66.
27.....	do.....	1849..... Bogen of Yeatman	74.6
10.....	do.....	1852..... Yeatman.	76.6
12.....	do.....	1849..... Yeatman.	80.6
29.....	Herbemont.....	— Bogen of others	78.7
18.....	Catawba.....	1852..... Werk	87.
34.....	do.....	1851..... Bogen	85.
32.....	Isabella, Sweet, ..	— Longworth.	59.4
33.....	Catawba.....	1850..... Buchanan	79.2
44.....	do.....	1852..... Rehfuess.	85.4
28.....	do.....	1849..... Bogen	75.8
23.....	do.....	1851..... Bogen	79.8
45.....	do.....	1848..... Hatch	75.
10.....	do.....	1849..... Yeatman	70.6
13.....	do.....	1850..... Yeatman	75.
55.....	do.....	1851..... Bogen	92.
50.....	do.....	1851..... Werk	92.
57.....	do.....	— Longworth.	96.7
54.....	do.....	1851..... Bogen	92.
51.....	do.....	1851..... Werk	96.7
52.....	do.....	1850..... Bogen	95.
52.....	do.....	1850..... Bogen	96.2
56.....	Moselle (foreign) ..	—	70.

No. 32 was Mr. Longworth's "Sweet Wine for Sweet Ladies." Many of the members made no notes of its quality—several placed it as a Sweet Wine, very high. The low grade others gave it, is attributable to the opinion entertained by most of the members, that still wines, at least, should be made from the pure juice of the grape only.

#### Pittsburg Horticultural Society.

PITTSBURGH, June 23, 1853.

DR. WARDER.—The Pittsburg Horticultural Society has the following organization for the current year:

President—John Chislett.

Vice President—John Murdock, Jr.

Recording Secretary—Charles Lockhart.

Corresponding Secretary—Robert McKnight.

Treasurer—A. Harshperger.

We have monthly exhibitions, when small prizes are awarded for the best articles offered.

Our annual exhibition will take place on the 6th, 7th, 8th, and 9th of September. I have already sent you a prize list. We hope to see the Florists and Fruit-growers of Cincinnati represented.

Your obedient servant,

ROBT. MCKNIGHT, Cor. Sec'y.

WEDNESDAY, August 3, 1853.

The committee appointed to examine the various varieties of Strawberries, reported as follows:

Your committee, having examined the several kinds of strawberries grown in the vicinity of Pittsburg, and having been aided by the experience of the growers themselves, as well as a close examination of the plants on the ground, have prepared the following report, viz:

From the great productiveness, largeness, and uniformity of size of the Buist's Prize Strawberry, we consider it the best and most profitable for market gardeners, and would class it first on our list.

The Victoria, which is now called the British Queen, is an earlier ripening fruit than the above. A few of the first pickings, having a coxcomb shape, are very large. Add to this its exquisite flavor, which makes up for the shortness of the crop, and it is entitled to be second best on our list.

We class Hovey's Seedling, No. 3, on our list. It is a very fine fruit, and can not be called much inferior, if any, to No. 1 and 2, being very prolific, and well deserves its place among the collection of either an amateur or market gardener.

In conclusion, your committee would state that they are fully satisfied, that the plants and fruit sold in this market, by the name of Wilmot's Superb, are the identical Buist's prize strawberry.

The committee also report the several varieties, viz: McAvoy's Superior, Schneicke's Pistillate, Burr's New Fine, Biston's Fine, and others, are in the hands of proficient cultivators, but another year will be required to test their value.

A report was read from Mr. Updike respecting the Curculio, which he had driven off successfully for four years, by using one peck of dry well slacked lime, and one pound of flour sulphur; mix thoroughly, and dust it over the entire tree early in the morning, when the dew is heavy; this should be repeated for five or six times, or until every part of the tree is well coated, with a two gallon tin canister, punched with quarter inch holes, and a handle of proper length, a tree may be well dusted in two minutes. The best time to begin using the preparation is as soon as the bloom begins to fall. Some of the lime will of course fall to the ground around the tree. It is recommended to dig this lightly under the surface.

The monthly display of fruits, flowers, and vegetables was a very creditable one indeed, and premiums were awarded as follows:

The Committee on Vegetables report:

For the best Stowel Evergreen Corn, R. McKnight. For the best peppers, R. McKnight. For the best Lima Beans, very fine, R. McKnight. For the best Ice Cream Water Melons, large and fine, R. McKnight. For the best Egg Plant, James McKain. For the best White Spine Cucumbers, extra fine, Alexander Campbell. For the best Sugar Corn, T. B. Updike. For the best Neshannock potatoes, extra fine, John Murdock, jr.

T. B. UPDIKE,  
JAS. WARDROP,  
JAS. MCKAIN.

The Committee on Plants and Flowers report the following premiums, viz:

To Jas. Mc Kean for best hand bouquet.

Best collection of Roses to J. & W. Murdock.

do do Dahlias do do

do do Verbenas, Jas. Wardrop.

do do Floxes, John Murdock, Jr.

A. CAMPBELL,  
ROBT. MCKNIGHT,  
H. S. RINGWALT.

The Fruit Committee beg leave to report that the display of fruit was very fair.

To George Lowen, Premium for basket of Peaches.

To Jas. Wardrop, for basket of Peaches.

To John L. Snider, for Peaches and four varieties of Plums and Apricots.

To John Murdock, Jr., for one basket very fine Bloodgood Pears.

To W. & J. Murdock, for four varieties of Apples.

To T. B. Updyke, for a basket of early Hudson Plums.

H. Woods,  
T. J. BISHAM.

#### Cayuga Horticultural Society.

The first exhibition of the Cayuga County Horticultural Society was held at "Stanford Hall," in Auburn, on Friday, the 17th day of June, and it presented a fine display of flowers, fruit, and vegetables. The attendance of visitors was very large. The articles presented for exhibition were very tastefully arranged upon the several stands, by the committee appointed for that purpose, which added much to the display.

The display of strawberries, according to the report, was very fine; there were thirteen contributors, and fifteen or twenty varieties shown. P. R. Freehoff exhibited thirteen varieties; R. G. Pardee, thirteen varieties, and Dr. A. Thompson, four varieties. Mr. Pardee had in his collection the Crescent Seedling, but as no particular notice of it appears in the report, we conclude it has failed when in comparison with the older sorts. The premiums for strawberries were awarded as follows: To Mr. P. R. Freehoff, for the best and most extensive collection. For the second best, to A. V. Pulsifer. For the best and finest flavored variety, to Henry Morgan, for Hovey's Seedling. For the second best, to S. A. Goodwin, no names given. For a choice seedling, to George Clapp.

#### Chester County Horticultural Exhibition.

The Chester County Horticultural and Industrial Exhibition, usually held in June, occurred on the 16th, 17th and 18th ult. In addition to the fruits of the season, flowers, green-house plants, vegetables, the display embraced agricultural implements, etc.

An increased impulse is being given to Horticultural as well as Agricultural improvement by these annual exhibitions, all over the country. The effect of which will be, and is seen, not only in an increased production from the soil, but in those moral influences with which attention to these two great departments is always more or less connected.

Some specimens of prepared willow twigs for baskets, were exhibited by Isaac G. Darlington, which appeared well adapted to the purpose. They were of the variety Vitellina, which is much used in Europe for baskets. It is found in several parts of Chester county, and according to Dr. Darlington's Flora Cestrica, came originally from some wicker work found sprouting in Dock creek, near Philadelphia, by Dr. Franklin, who took them out and gave them to Chas. Norris, by whom they were reared, on grounds now the site of the Custom House, in Philadelphia.

#### Pennsylvania Horticultural Society.

The twenty-fifth annual exhibition of this Society is to be held in Philadelphia, on the 21st, 22d, and 23d of September next. We have been favored with a printed schedule of premiums, embracing the usual extensive list of floral designs and bouquets, fruits, flowers, and vegetables. One of the premiums strikes us as rather novel. "For the best twenty plants from a private collection," a silver pitcher is proposed to be "presented," of the value of \$200. Thus far, seemed very liberal, but on reading farther, we find it is to be held by the owner, (not of the pitcher,) but of the successful collection, for one year, and to be yearly competed for; the donor's and victor's names to be engraved thereon. There is originality at least in this premium.—*Farm Journal*.

#### Warren County Agricultural Society.

THANKS to my friend, W. F. Parshall, I have received a pamphlet containing the premiums and regulations, and the awarding committee, for the fourth annual fair of the Warren County Agricultural Society; to be held at Lebanon, on Wednesday and Thursday, 14th and 15th of September, 1853.

Among the premiums for appropriate articles, fruits, and flowers, several copies of this work are offered. This is highly gratifying and encouraging to me.

##### Officers:

President—J. P. Gilchrist, Lebanon.

Vice-President—Robert Wilson, Union Township.

Treasurer—John Simonton, Lebanon.

Secretary—H. M. Stokes, Lebanon.

#### American Association for the Advancement of Science.

THIS body of the savans of our country has recently held a very pleasant meeting at the city of Cleveland, Ohio. The attendance was large, and the general character of the papers read was highly creditable to parties presenting them. The section of Mathematics and Physics contained the most eminent men; that of Natural History was not without its ornaments, however, although many of the most eminent geologists were absent, in the field.

I had hoped in this body to have had the strawberry question referred to some eminent botanist, and submitted a resolution referring to such an one as committee to report next year, "Upon the permanency of certain aberrations from the normal or general condition and development of the sexual organs in some plants," but unfortunately the committee was not raised, and the subject must be brought up as an original paper at the next session of this body, in Washington, District of Columbia, on the last Wednesday in April next.

## Correspondence.

#### WESTERN STRAWBERRIES ABROAD.

MR. EDITOR:—I doubt not that yourself, as well as many of your readers in this western portion of our hemisphere, before whose optics a copy of Mr. Hovey's Magazine for July may have chanced to fall, will have felt mightily amused thereby; especially by

the manner in which that impartial writer and learned pomologist has discussed the merits of our western seedling strawberries. In them he can discover little merit and many faults. Can it be that the transplanting into a sterile and inhospitable region has produced an unhappy change in their constitution, or that they have not yet become sufficiently acclimated? or can it be that our eastern seer has not a "correct standard to judge by?" The former is certainly the more rational conclusion; they need *acclimating*, and we shall all be forced to adopt the whole string of nonsensical dogmas upon that theory, which have been set forth by its advocates. As to the *standard* of comparison, if my recollection serves me, our committee has always assumed the Hovey Seedling as the criterion in their decisions.

The reviewer also suggests that eastern varieties do not succeed about Cincinnati; that we "have not yet discovered the mode of growing them!" Heaven save the mark! Have we not repeatedly exceeded his own measurements? But, last, and worst of all, and most cruelly wicked and malicious, yet, oh, how short sighted, and how like the foolish boy who threw stones up into the air, to fall and break his own head, he suggests, that we "have not the genuine varieties, free from mixture of sorts." Well, that is rich. Where, let me ask, can he find men who have familiarized themselves to the same extent with all the peculiarities of the different varieties in cultivation, as some of the Cincinnati cultivators and amateurs? Why, there are men hereabouts who could tell many varieties by a portion of a dried leaf; and then if we have not the eastern kinds correct and free from mixture, to whom are we indebted for the favor of receiving two or more sorts, when we have sent for one, to head quarters, on purpose to

have it genuine, without regard to cost, but to the great cultivator and advertiser himself, who has scarcely issued a copy of his monthly for years without a bulletin respecting the aforesaid Boston Seedling? Further, a neighbor suggests, from whom and at what date did *he* learn the true history and present state of the strawberry in its peculiarity of blossoming, if not from the poor, benighted backwoodsmen, who do not know "the genuine varieties?"

It is apparent to me that Mr. H. has used a bad pair of spectacles in this investigation; a shade of jealous green pervaded his vision, or perchance that he, too, has failed to have the genuine sorts. This appears to be the case in regard to No. 1, and Schneicke's Pistillate particularly, for his mention of them does not describe them correctly; both are prolific, especially the former, and neither have a pale, dingy color. Try again, Mr. Hovey, and let your committee try again also. Fear not; your own favorite with all its faults has a world-wide celebrity, and beauty enough to carry it through great opposition. It has and will prevail as widely as any strawberry can ever expect to prevail, and it has taught John Bull a useful lesson, even in spite of the botanists.

A glorious good fellow, however, is the aforesaid Boston editor, and honest with all to a fault; in the very same number of his work, he reports the proceedings of the Pennsylvania Horticultural Society, at which these western varieties were exhibited in perfection, and elicited high encomiums from the fruit committee, whose report he publishes in full. I honor his fairness in this as highly as the taste and judgment of the Philadelphia fruit committee, as evinced in their decision.

Yours,

FRAGARIA OCCIDENTALIS.

## Editorial.

### CLEVELAND—PEACH ORCHARD—VINEYARD.

THE favored region of the shore of lake Erie has often been referred to; the narrow belt of land forms a low ridge of light sandy soil, that is immediately within the genial influence of this extended sheet of water, which constantly envelopes it with a humid atmosphere, as with a friendly cloak, or even better than a garment retentive of caloric, for this vesture, in its change from a fluid to a liquid form, by condensation, is really a generator of sensible heat—a surrounding stove; strange as this may appear to those who are accustomed to shudder at the idea of a damp atmosphere, which they properly describe as being cold, it is no less true. They are right, too, in their sensations, but it is no less true that heat, or sensible caloric, is set free by the change of form referred to above. All portions of this belt are not equally favored with the immunity from frost, however, and some peach orchards have never yet yielded remunerative crops, even though they appear to be well situated.

The position of Messrs. Haughton & Morse, of whose success all have read, does not seem to be peculiar, except, perhaps, in the protection of a belt of timber to the west, and a group to the north-east. To the north they are exposed to the full influence of the lake. Their soil, however, is a delightful sandy loam, resembling strongly the peach lands of New Jersey, but generally in a fresh state, recently reclaimed from the forest. The appearance of the trees is admirable—fine size, fair growth, good color of foliage, but not too rank a growth, and fairly and evenly laden with beautiful and perfect fruit, now reddening under the sum-

mer sun, and beginning to swell for the ripening and harvest. They constitute a very interesting and promising object, and may well be contemplated with great complacency by the enterprising proprietors, who may see in them a rich reward for their years of untiring labor.

*Varieties.*—Mr. Haughton has endeavored to secure a continuous supply during the season, and selected those that ripen consecutively. His favorites appear to be Honest John, Crawford's Early, Crawford's Late, Old Mixon Free, Heath Free, Smock, Early Yellow Rareripec, etc. A large portion of these orchards is not yet in full bearing, but healthy trees in their third summer are all showing as much fruit as they should be allowed to carry. The yield this year promises to be five thousand baskets of choice fruit, besides the accompanying proportion of second grade. The home market of this growing city of the lake shore would consume a large quantity of fruit, but the proprietors look further, and contemplate drawing tribute from Cincinnati on the south, Chicago and Detroit on the west, and Buffalo on the east. The latter will always be their best and most accessible market, especially on account of the paucity of this fruit in that neighborhood, and because water conveyance is the cheapest and most favorable for delicate fruit. Cincinnati must expect to pay dearly for transportation from this point, nor receive the fruit in good condition. That market will probably be well supplied this year from the Miami orchards.

*Treatment.*—The ground has been well manured with leached ashes; where previously tilled with exhausting crops, a quan-

tity of charcoal, about a bushel, was deposited about each tree at the time of planting. Lime was applied, and the ground is kept constantly stirred with the plow; the whole surface is turned over at least twice during the season. The roots are examined thoroughly for the egeria larvæ twice a year, and left bare in the winter after the operation. The trees are trained standard high, to admit of plowing. Apples are planted in part of the ground at appropriate distances. Among these the Baldwin appears well, and proves itself profitable here. The Red Astrachan is now brilliant and tempting. The English Russet and Fall Pippin suffered most severely with the extreme cold of 1852, which caused the death of many fine trees of these varieties, and destroyed a long avenue of fine appricots.

*The Vineyard.*—I was agreeably surprised to find a very flourishing collection of grapes, just coming into fruit. The vines are planted about eight feet apart, and have been pruned short, somewhat upon the distaff method. They are remarkably healthy, vigorous, and bearing a heavy crop for their age, which is four years. The bunches are not large, but the berries are well swollen, and have not been attacked by any disease whatever, and look as though they would ripen handsomely. The varieties collected are Isabella, Clinton, and Schuylkill or Cape; the former appears well adapted to this region and ripens well; so does the Clinton, but the Catawba is too uncertain in its maturing to induce extensive cultivation.

This vineyard is planted upon new ground, of a deep sandy loam; the undergrowth was thoroughly cleared off, when the soil was stirred to the depth of fifteen or eighteen inches by a large plow, and a fine tilth produced, which is maintained by shallow culture during the summer. The preparation of this piece of ground, measuring about an

acre, grubbing, plowing, and removing part of the stumps, is estimated at two hundred dollars. Query—Would not grubbing and digging three feet deep have been a better preparation, at a less, or even at the same expense?

The soil appears well adapted to this culture, but will bear the application of ashes with advantage. The cuttings strike with great facility and certainty, so that the grape nursery presents a uniform appearance. Indeed, this light soil is well suited to nursery purposes, to which the proprietors have applied themselves to some extent. Their evergreens are very promising, especially those imported from Europe. Deodars, Lebanonons, Pines, etc., look very well; especially to be admired is their collection of *Pinus laricio*; and their squares of Hemlock can not be surveyed without a feeling of pleasure by the admirer of American evergreens.

#### Fair of the American Institute.

THE annual cattle show, as appears from the pamphlet of the managers, will embrace agricultural, horticultural, and floral departments, and will be held in New York, October, 1853.

The annual exhibition of cattle, of all breeds, and all other useful farm stock, will be held on the 19th, 20th, and 21st days of October, 1853, at Hamilton Square, a beautiful plot of ground of ten acres, on third avenue, about four miles from the City Hall.

Owners and breeders of stock from all parts of the United States, are invited to attend and bring their cattle. The list of awards has been revised, and the number of premiums and their value increased.

A PREMIUM OF ONE HUNDRED DOLLARS will be paid by the American Institute for the discovery of an effective and practicable remedy against the ravages of the Curculio on the plum and other fruit trees of our



country. The remedy must be thoroughly tested, and proved satisfactorily to the committee to whom it will be referred.

The department of the great fair of the American Institute, to be held at Castle Garden, will be opened at that place for the receipt of goods and specimens on the 1st, 3d, 4th, and 5th days of October. It will be open to visitors on the 6th, and continue open through the month. Circulars, with full details, may be obtained at No. 351 Broadway.

#### Elliott's New Fruit Book.

WHEN at Cleveland, attending the meeting of the Scientific Association, about the 1st of August, I enjoyed an opportunity of glancing over the progressing manuscript of F. R. Elliott's new work on pomology. The author has been devotedly engaged in the study of fruits for many years, and possesses a greater knowledge, especially of western fruits, than any person I have met. His work will be put to press this fall, and when completed will form a valuable addition to the literature of the orchard, and will be indispensable to all cultivators who wish to keep posted up with the advance of the times. Mr. E. has adopted an alphabetical arrangement, which will make reference easy; he also subdivides some fruits into three classes, according to their quality and profit for cultivation, in this, each person will choose a standard for himself, but a tolerable approximation may be made that will suit most tastes.

The illustrations of this work will be superior to those generally presented, as the sections of fruits are shaded to show the characters distinctly. In most cases the seeds are introduced; these furnish very important characters, and I may claim to myself some credit for these suggestions. A correspondent in the Horticulturist, says:

"Should his book not go beyond *the cherries* even, it can not fail of interesting pomologists, the Union over."

#### The Earth, Plants, and Man.

By JOACHIM FREDERICK SCHOUW, Professor of Botany in the University of Copenhagen.

At a recent meeting of the New York Farmer's Club, Mr. Meigs, the excellent secretary, read some translations from this interesting work, from which the following has been selected:

"The plants disclosed in the ruins of Herculaneum, Pompeii, and Stabiae, enable us to judge of the alterations in them during the long period of 1700 years. The remains of plants—the painted plants—those in Mosaic, remain to instruct us. Many of those painted are fanciful. The stone pine, the Cypress, the Aleppo pine, the dwarf palm, wheat, barley, millet, no Indian corn, no rice, broad beans, perfectly like our modern; asparagus in bunches, onions, radishes, turnips, a small gourd, the olive—a glass jar contained olives which retained their flavor—the oleander perfectly the same with ours; no lemon, orange, or citron; the citron was introduced into Italy in the third century, 200 years after the cities were buried; the orange and lemon still later; pears, peaches, apples, cherries, almonds, plums, medlars, pomegranates, were there."

#### Napoleon's World's Fair.

THIS Industrial Exhibition progresses finely in its course of preparation, and promises to be quite equal to that of Great Britain. America, and especially our Union, will, it is hoped, be well represented there. It has also been suggested that the governor appoint a special commissioner from Ohio to attend to the interests of exhibitors.

Official notice has been received at the department of State, that articles, the importation of which is prohibited in France, will be admitted free of duty. If kept in the country, a duty of thirty per cent. *ad valorem* must be paid.

**Ohio State Fair.**

PASSING Dayton the other day, I spent a couple of hours very pleasantly with Mr. R. W. Steele, upon the grounds selected by the State Board of Agriculture, for the great annual jubilee. They are pleasantly situated near the Great Miami, and are well shaded by beautiful forest trees. The fencing has been completed for some time, and the floral hall and other buildings are in a good state of forwardness.

There is no doubt that this will be a very fine exhibition of all kinds of the productions of the soil, and of the agricultural implements for which our State has become famous.

**Acknowledgments—Fruits.**

GEORGE B. GRAFF, M. D., who has been actively engaged in south-western Indiana, in the laudable work of disseminating fine fruits, shrubs, flowers, and improved implements among his neighbors, has done me the favor to send a specimen of an early apple which has been cultivated in that region for forty years; it is known as the June apple, but does not correspond with any description I have met with. Its size is medium, oblong, regularly tapering; cavity, small, regular, deep; stem, slender, half an inch long; basin, shallow and regular; eye closed. Skin, smooth, shining when rubbed, greasy, when kept, and of the deepest red color, not much shaded; flesh, white, fine grained, and when too ripe, dry and indifferent in quality—when in good condition. The Doctor writes that it ripens with Prince's Harvest, July 1st to 25th, and that the tree is a vigorous grower, with a strong, handsome, upright head; the leaves resemble those of the Red Astrachan.

John Johnson, of Ripley, Ohio, sent me some very fine specimens of Bolmar's Washington plum, grown by his neighbor, Thomas

Cutter. Some of them measured six and a quarter inches in circumference. Though detained in the delivery they were delicious. Mr. J., who takes an active part in the Brown County Association, also refers to Mr. Cutter's method of preserving fruits, and says that a jar put up last September, was recently opened, and found in fine condition. Pure well water was used to expel the air; whether hot or cold is not stated.

**The Frontispiece.**

**A PLANTATION HOUSE.**—A southern house is here presented, plain, unpretending, less ornate in its finish, as well as less expensive in construction than some others given in this work. It may occupy a different site, in a hilly, wooded country of rougher surface, but equally becoming it, as the other would more fitly grace the level prairie, or spreading plain, in the more showy luxury of its character.

This house stands 46×44 feet on the ground, two stories high, with a full length veranda, 10 feet wide in front, and a half length one above it, connecting with the main roof by an open gable, under which is a railed gallery for summer repose or recreation, or to enjoy the scenery upon which it may open. The roof is broad and overhanging, thoroughly sheltering the walls, and giving it a most protected, comfortable look. Covering half the rear is a lean-to, with shed roof, 16 feet wide, communicating with the servants' offices in the wing, the hall of which opens upon a low veranda on its front, and leading to the minor conveniences of the establishment. The main servants' building is 30×20 feet, one and a half stories high, with a roof in keeping with the main dwelling, and a chimney in the center. In the rear of this is attached a wood-house, with a shed roof, thus sloping off, and giving it a reposed, quiet air from that point of view. A narrow porch, 23 feet long and 8 wide, also shades the remaining rear part of the main dwelling, opening on to the approach in rear.

**INTERIOR.**

The front door opens into a hall 34 feet long and 10 feet wide, with a flight of stairs. On the left of this opens a parlor or dining-

room, 22×18 feet, lighted by two windows in front and one on the side, and connecting with the dining-room beyond, which is 18×16 feet, with two small dining closets between. The dining-room has two windows opening on to the rear veranda. Under the cross flight of stairs in the hall, a partition separates it from the rear hall, into which is a door. On the right of the entrance hall is a library, 18×18 feet, lighted by three windows. At the farther end is a closet, and by the side of it a small entry leading into the nursery or family bedroom, 18×15 feet in size, which also has a corresponding closet with the library. On the rear of the nursery is a flight of back stairs opening from it. Under these stairs, at the other end, a door opens to another flight leading into the cellar below. A door also leads out from the nursery into the rear passage, to the offices; another door on the further side of the room opens into the rear hall of the house. The nursery should have two windows, but the drawing, by an error, gives only one. From this rear hall a door opens on the rear veranda, and another into the passage to the rear offices. This passage is six feet wide and 34 feet long, opening at its left end on to the veranda, and on the right, to the servants' porch, and from its rear side into three small rooms, 10 feet square each, the outer one of which may be a business room for the proprietor of the estate; the next, a store-room for family supplies; and the other a kitchen closet. Each of these is lighted by a window on the rear. A door also leads from the rear passage into the kitchen, 20×16 feet in area, with a window looking out in front, and two others on the side and rear, and a door into the wood-house. In this is placed a large chimney for the cooking establishment, oven, etc. A flight of stairs and partition divides this from the wash-room, which is 14×14 feet, with two windows in the side, and a door into the wood-house. This wood-house is open on two sides, and a water-closet is in the far corner. The small veranda, which is six feet wide, fronting the kitchen apartments, opens into the bath-room, 9×6 feet, into which the water is drawn from the kitchen boilers in the adjoining chimney. Still beyond this is the entrance to the water-closets, 6×5 feet.

The chamber plan is simple, and will be readily comprehended. If more rooms are

desirable, they can be cut off from the larger ones. A flight of garret stairs may also be put in the rear chamber hall. The main hall of the chambers, in connection with the upper veranda, may be made a delightful resort for the summer, where the leisure hours of the family may be passed in view of the scenery which the house may command, and thus made one of its most attractive features.

We have given less veranda to this house than to the last, because its style does not require it, and it is a cheaper and less pains-taking establishment throughout, although, perhaps, quite as convenient in its arrangement as the other. The veranda may, however, be continued round the two ends of the house, if required. A screen, or belt of privet, or low evergreens may be planted in a circular form from the front right-hand corner of the dwelling, to the corresponding corner of the rear offices, enclosing a clothes drying yard, and cutting them off from too slightly an exposure from the lawn in front. The opposite end of the house, which may be termed its business front, may open to the every-day approach to the house, and be treated as convenience may determine.

For the tree decoration of this establishment, evergreens may come in for a share of attraction. Their conical, tapering points will correspond well with its general architecture, and add strikingly to its effect; otherwise the remarks already given on the subject of park and lawn plantation will suffice. As, however, in the position where this establishment is supposed to be erected, land is plenty, ample area should be appropriated to its convenience, and no pinched or parsimonious spirit should detract from giving it the fullest effect in an allowance of ground. Nor need the ground devoted to such purposes be at all lost, or unappropriated; various uses can be made of it, yielding both pleasure and profit, to which a future chapter will refer; and it is one of the chief pleasures of retired residence, to cultivate, in the right place, such incidental objects of interest as tend to gratify, as well as to instruct, in whatever appertains to the elevation of our thoughts, and the improvement of our condition. All these, in their place, should be drawn about our dwellings, to render them as agreeable and attractive as our ingenuity and labor may command.—*Allen's Rural Architecture.*

## METEOROLOGICAL TABLE.

CINCINNATI, JULY, 1853.

THERMOM.			WEATHER.			RAIN.	Data.		WINDS, &c.		
Date.	Min.	Max.	Sunrise.	Noon.	Sunset.						
1	76	94	clear . . .	clear . . .	clear . . .	....	1	Light NW.; brisk NW.; light NW.			
2	75	91	do. . . . .	cl'r, rain	var. rain.	1.13	2	Light NW; calm; light SE; high SW; light SW.			
3	74	85	var. rain . .	rain . . .	do do.	2.52	3	Calm; light S.; brisk NW.; light S.			
4	71	89	variable . . .	clear . . .	clear . . .	....	4	Calm; light E.; light W.			
5	67	88	clear . . . .	do. . . . .	do. . . . .	....	5	Calm, light SW.; brisk SW., light SW.			
6	70	81	do. . . . .	do. . . . .	do. . . . .	....	6	Light N.; briak N.; light N.			
7	66	83	do. . . . .	do. . . . .	do. . . . .	....	7	Light NE.; light S. and SE. (Locusts.)			
8	67	90	do. . . . .	do. . . . .	do. . . . .	....	8	Calm; light W.; calm. (Apricots and peaches.)			
9	69	94	do. . . . .	cl'r, rain	cloudy . .	.18	9	Light SW; brisk W.; light SW.; calm.			
10	73	87	variable . . .	do. do.	do. . . . .	.09	10	Light NW.; light S.			
11	74	79	cl'o'dy, rain	variable.	variable . .	.10	11	Light E.			
12	68	81	clear . . . .	clear . . .	clear . . .	....	12	Calm; light NE. Calm at eve.			
13	63	83	do. . . . .	do. . . . .	do. . . . .	....	13	Calm; light S. and SW.			
14	64	83	cloudy . . .	variable.	variable . .	....	14	Calm; light SW.; brisk SW. and W.; light W			
15	72	87	variable . . .	do. . . . .	rain, var.	.05	15	Calm; light SW. and W. and NW.			
16	69	79	clear . . . .	clear . . .	clear . . .	....	16	Calm; light NW.; light E.; calm.			
17	63	81	do. . . . .	do. . . . .	do. . . . .	....	17	Calm; light SW.; Calm.			
18	63	84	do. . . . .	variable.	var. rain.	.09	18	Calm; calm, light variable.			
19	66	82	do. . . . .	do. . . . .	variable . .	....	19	Light E. and variable.			
20	63	75	rain. . . . .	do. . . . .	do. . . . .	.16	20	Light E. and NE; briak NE.; calm.			
21	64	85	clear . . . .	clear . . .	clear . . .	....	21	Calm; light variable; calm.			
22	65	86	do. . . . .	do. . . . .	do. . . . .	....	22	Calm; light SW. and S.			
23	66	85	do. . . . .	do. . . . .	do. . . . .	....	23	Calm; brisk S.; calm. (Wild Cherries.)			
24	65	87	do. . . . .	do. . . . .	variable . .	....	24	Light S. and NW.			
25	73	78	rain. . . . .	variable.	rain, var.	.42	25	Light W. (Water Melons.)			
26	64	69	cloudy . . .	rain . . .	cloudy . . .	.07	26	Light NW.; calm.			
27	63	75	do. . . . .	variable.	clear . . .	....	27	Calm; light E. (Sweet Potatoes.)			
28	59	81	fog, clear . .	clear . . .	do. . . . .	....	28	Calm; light SW.; calm. (Martins depart.)			
29	64	84	clear . . . .	variable.	variable . .	....	29	Calm; light SW.; brisk SW.; light SW.; calm.			
30	73	83	variable . . .	do. . . . .	do. . . . .	....	30	Calm; light SE.			
31	67	84	clear . . . .	do. . . . .	clear . . .	....	31				
Rain in the month, inches,						4.81	Clear days in the month, . . . . .				13
							Variable — sun visible, . . . . .				17
							Cloudy — sun not visible, . . . . .				1
Mean temperature of the month, . . . . .						75.65	markedly pleasant, being the coolest July we have				
do.	do.	July, 1852, . . . . .	75.65	experienced, except two, for the last ten years, and							
do.	do.	do. 1851, . . . . .	80.11	nearly four degrees below the mean of <i>June</i> last; and,							
do.	do.	do. 1850, . . . . .	79.12	in a sanitary point of view, it has been remarkably							
do.	do.	do. 1849, . . . . .	81.65	favorable in this region. The rain, although very un-							
do.	do.	do. 1848, . . . . .	76.42	equally distributed throughout the month, (and very							
do.	do.	do. 1847, . . . . .	73.86	partial in the country,) is about the usual average in							
do.	do.	do. 1846, . . . . .	74.42	quantity.							
do.	do.	do. 1845, . . . . .	76.00	Pleasant breezes have rendered the warmest days							
do.	do.	do. 1844, . . . . .	75.84	in this month quite comfortable in the shade.							
do.	do.		78.47								

Mean temperature of the month,	July, 1852,	75.65
do. do.	do. 1851,	80.11
do. do.	do. 1850,	79.12
do. do.	do. 1850,	81.65
do. do.	do. 1849,	76.42
do. do.	do. 1848,	73.86
do. do.	do. 1847,	74.42
do. do.	do. 1846,	76.00
do. do.	do. 1845,	75.84
do. do.	do. 1844,	78.47

markedly pleasant, being the coolest July we have experienced, except two, for the last ten years, and nearly four degrees below the mean of *June* last; and, in a sanitary point of view, it has been remarkably favorable in this region. The rain, although very unequally distributed throughout the month, (and very partial in the country,) is about the usual average in quantity.

Pleasant breezes have rendered the warmest days in this month quite comfortable in the shade.

JOHN LEA.

REMARKS.—The weather this month has been re-

END OF VOL. III.

















